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MECHANISMS OF PHOTOCHEMICAL REACTIONS IN URBAN AIR
Volume II. Chamber Studies

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ABSTRACT

The smog chamber facility of the Statewide Air Pollution Research Center has been employed in a study designed to provide experimental data required for the validation of kinetic computer models of chemical transformations in polluted atmospheres, for incorporation into urban airshed models. A 5800-l, Teflon-coated, evacuable chamber and 25-KW xenon arc solar simulator were used for irradiations, under simulated atmospheric conditions (85°F, 50% relative humidity, 2 ppm CO, 1 atmosphere of air), of hydrocarbon-NO_x systems beginning with a single hydrocarbon and continuing with two- and three-component hydrocarbon mixtures. Detailed time-concentration profiles were obtained for a wide range of products as well as the reactants employed. Relative and absolute concentrations of the hydrocarbon-NO_x systems were chosen on a factorial design basis. Propene, n-butane and toluene were selected as the initial hydrocarbons representative of alkenes, alkanes, and aromatics, respectively.

This report presents results obtained in the first eighteen months of the program (July, 1973 through November, 1974). Preliminary chamber and light source characterization studies were carried out and included determination of ozone lifetimes, absolute light intensity, spatial homogeneity of light within the chamber, mixing and equilibration times, and sampling rates. Some preliminary efforts to characterize surface effects were made. The photochemistry program included investigation of the propene-NO_x and n-butane-NO_x photooxidation systems and also a study of the effects on these systems of variables such as added aldehydes, temperature, and initial NO/NO₂ ratio. Data from this experimental program are presented, and their uses and limitations discussed. It has been concluded from these results that still more stringent characterization of light source properties and wall effects is required to obtain data of greater utility in model refinement. Such higher-order characterization is being developed in this on-going program.

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I. INTRODUCTION

A. Background

The great difficulty in studying quantitatively the chemical changes occurring at part per million or lower concentrations in simulated atmospheric photooxidations has been well known for almost two decades. Today it is generally agreed that a major source of quantitative discrepancies in such studies is the fact that the design features of smog chambers can cause rather more substantial perturbations on photooxidations in the HC-NO_x system than earlier realized by most researchers in the field.

The resulting lack of accuracy and reproducibility encountered in experimental data obtained from studies in such chambers have been a significant obstacle to detailed, quantitative computer-kinetic calculations (modeling) of the rates, products, and mechanisms of photochemical air pollution. Thus, extension and validation of imaginative and sophisticated kinetic descriptions developed in a number of laboratories during the last five years have been limited to a significant extent by the lack of a substantial body of accurate and consistent experimental data in the ppm-pphm concentration. For example, at an air pollution modeling symposium held in 1972, three modeling teams reported that the precision of the smog chamber data then available was insufficient to permit further refinement or validation of their reaction mechanisms for the formation of photochemical smog.¹ During the development of their extensive mechanism for the chemistry of simulated polluted urban atmospheres, Calvert and his coworkers^{2,3} reached a similar conclusion:

"...There is a need for a great deal more fundamental scientific research related to the chemistry and reaction kinetics of photochemical smog formation before the full predictive potential of the computer simulation of the chemistry of the urban atmosphere and truly scientific air pollution control measures and methods can be realized."

These authors then listed five design criteria that should be met in a smog chamber facility to be used in the generation of data of the precision and accuracy required to permit further refinement and validation of models of photochemical smog formation:

- (1) To determine the effects of water on atmospheric reactions, chamber humidity should be precisely controlled

and accurately measured and some experiments should be run at "zero" relative humidity.

(2) The concentrations of smog species should be continuously measured in real-time using specific analytical methods, preferably in-situ spectroscopic methods such as long-path infrared spectroscopy.

(3) The background levels of oxides of nitrogen, O_3 , CO, aldehydes, PAN and non-methane hydrocarbons in the matrix air used in the chamber should be reduced well below the levels of these species generated by the chamber experiments being run.

(4) To avoid kinetic complications, irradiations should be continuous and should be performed using a light source whose short wavelength energy distribution is known accurately and whose light output may be blocked during warm up by a shutter system.

(5) Chamber temperatures should be precisely controlled and held constant throughout an experiment.

The need for more precise chamber data was also recognized by Statewide Air Pollution Research Center (SAPRC) research personnel in 1970.⁴ At that time the design of a new smog chamber facility was begun with the goal of developing a body of chamber data suitable for the refinement and validation of both detailed and "lumped" models of photochemical smog formation. Under funding from the California Air Resources Board, the planned chamber facility was constructed⁵ and experiments were begun during the summer of 1973.

B. SAPRC Environmental Chamber Facility

The major components of the facility are a 25-KW solar simulator⁶ and two smog chambers, each having a volume of approximately 6,000 l. One chamber is of "conventional" design with all-glass walls and (black lamp) fluorescent lighting similar to that used in previous studies.⁵ The second chamber⁷ may be evacuated and temperature regulated (Figure 1). It has Teflon-lined walls, and quartz end windows which transmit UV radiation down to 200 nm. The beam of the solar simulator (Figure 2) is collimated and its diameter is smaller than the inner diameter of the evacuable chamber, thus minimizing surface photochemistry. The temperature of the evacuable chamber

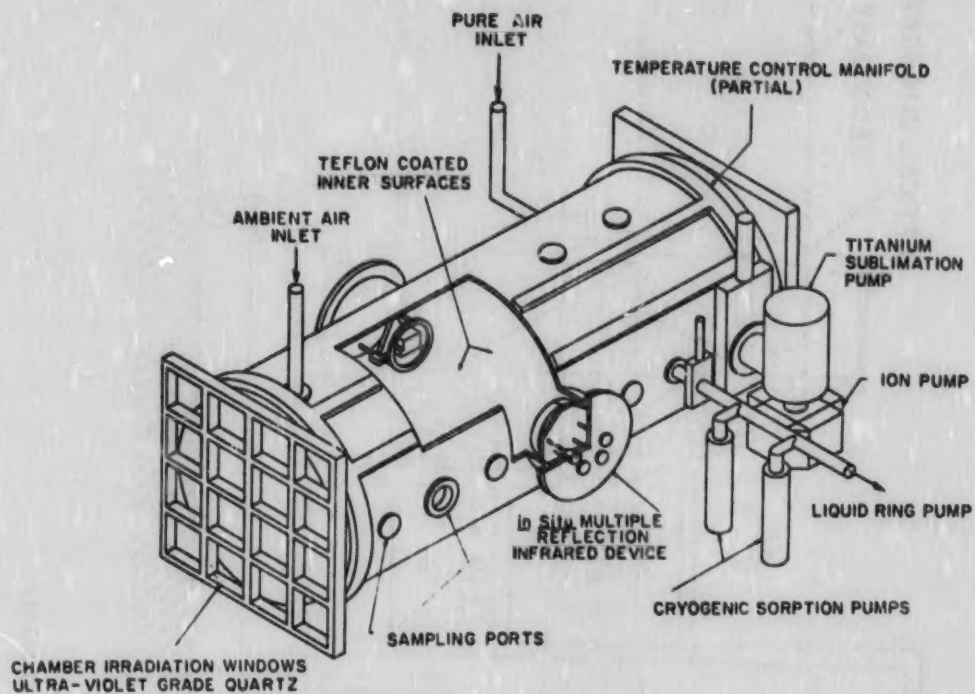


Figure 1. Evacuatable Smog Chamber

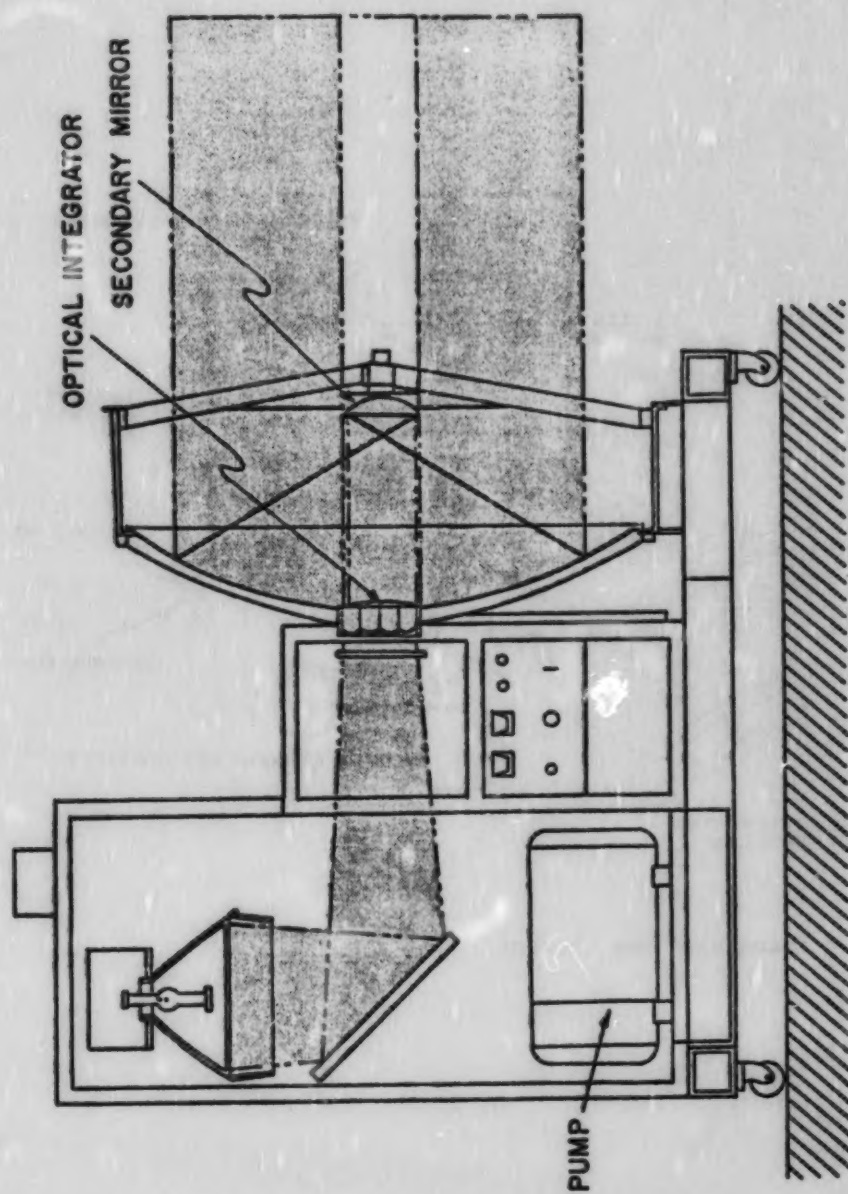


Figure 2. 25-KW Solar Simulator

may be varied from -20° to -215°F and the hydrocarbon-free pumping system of the chamber has a nominal base pressure of 10^{-5} torr. Thus, periodic cleaning of the chamber can be accomplished by heating to $>200^{\circ}\text{F}$ and pumping to $\sim 10^{-3}$ torr. The two chambers have common analytical instrumentation and a common pure-air system (Figure 3) which was designed to provide air containing less than 1 ppb of most contaminants.⁸ The chamber pumping system has been upgraded since the work reported here was conducted and the current configuration of the evacuable chamber facility is shown in Appendix A.

This facility fulfills the design goals set forth in the original SAPRC proposal to the California Air Resources Board.⁴ It also comes reasonably close to meeting the design criteria of several modeling groups^{1,3,9,10} as discussed above. For example, with respect to the specific requirements listed above, the following operational capabilities of the chamber facility can be noted:

(1) The moisture content of the matrix air in either of the SAPRC chambers can be precisely controlled and accurately measured over the entire range from zero to one hundred percent relative humidity. Thus, it is possible to make runs both for very dry systems and for systems whose moisture content is known with accuracy. This permits systematic investigation of the effects of water upon smog reactions.

(2) Use of either a one-meter scanning monochromator, or a Fourier infrared interferometer, with the White cell optics mounted within the evacuable chamber allows specific, real-time infrared monitoring of many smog species at a 70-meter pathlength (corresponding to a detection limit of of ~ 50 - 100 ppb for most species).

(3) The air purification system, which prepares the matrix air used in both chambers, reduces the levels of all hydrocarbons in the matrix air to 1 ppb or less (except for CH_4 , C_2H_6 and C_3H_8).⁸ Satisfactorily low levels of all other monitored pollutants are also obtained.

(4) The short wavelength energy profile of the solar simulator has been accurately measured using an absolute spectroradiometer and is a good mimic of the solar spectrum.⁶ The solar simulator design includes a shutter system which blocks the simulator beam during warm up. Once warm up is complete and steady light output has been attained, experiments are always conducted under conditions of continuous irradiation.

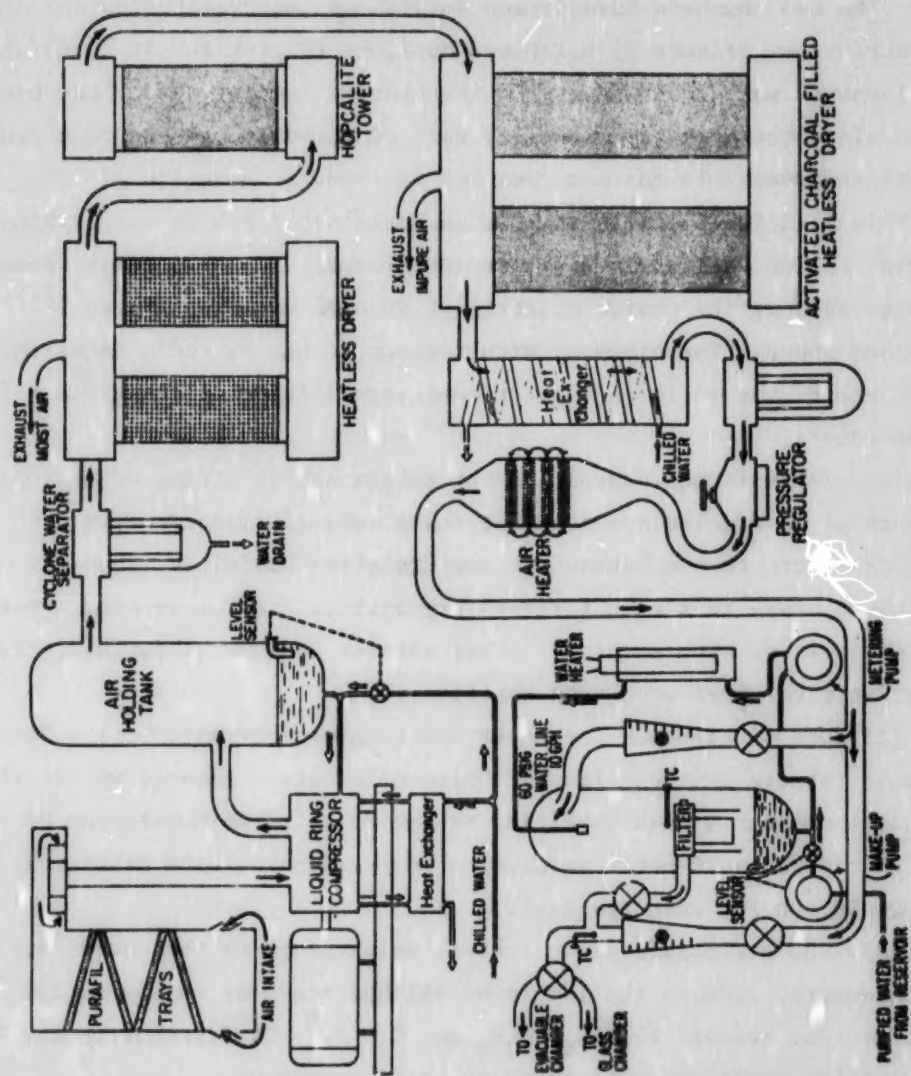


Figure 3. Air Purification System

(5) Temperatures in the evacuable chamber can be varied from -25° to $+100^{\circ}\text{C}$ with a differential stability throughout the chamber of $\pm 2^{\circ}$. An array of thermocouples are used to continuously monitor the chamber temperature.

C. Objectives

As a result of a number of detailed discussions between scientists at the EPA and the SAPRC, a chamber research program was formulated to provide input to the modeling program being conducted by the EPA and its contractors. This experimental program provides for characterization of significant chamber effects and a systematic investigation of the time-dependent and variable- (such as relative humidity) dependent behavior of hydrocarbon-oxides of nitrogen (HC-NO_x) systems undergoing simulated solar irradiation. Irradiation of the HC-NO_x systems is carried out on a factorial design basis and includes investigation of the effect of aldehydes on these systems. The hydrocarbons being studied are propene, n-butane and toluene, first individually and subsequently in two- and three-component mixtures.

This report covers the portion of this on-going program which was carried out from its inception in July 1973 through November 1974 and includes preliminary chamber characterization experiments, irradiations of propene- NO_x and n-butane- NO_x systems, and a study of the effects of selected variables on these systems. Details of the experimental program, the results obtained, and a discussion of the limitations of these data are given in the following sections.

D. Limitations of the Initial Data Set

Although current experimental programs in the SAPRC evacuable chamber-solar simulator facility are being conducted at a reasonable level of characterization and quality assurance, the HC-NO_x data reported here for the period July 1973-November 1974 are less completely characterized. Specifically, during the period covered by this report we had insufficient experience with the solar simulator optical system in terms of its maintenance, as well as the effects of aging of optical components, on its spectral distribution and intensity. It is now clear that for this type of light source a spectral distribution determination during each experiment is essential, and this must be augmented by frequent k_1 actinometry experiments to determine absolute

intensity. Periodic recoating of the solar simulator optical components is also necessary to maintain light intensity and spectral distribution within desirable limits. While such procedures are now carried out routinely, they were not conducted frequently enough during the period covered by this report to permit the degree of light source characterization needed for the current level of sophistication in model development and refinement.

A second limitation on our early data reported here concerns so-called "memory" or "dirty chamber" effects, which appear to be inherent in irradiation vessels employed in HC-NO_x photooxidation studies. Such effects have been noted by a number of previous chamber workers, as well as by ourselves, but only very recently has progress been made in characterizing the nature and origin of these effects and knowledge in this area is still incomplete. Thus, the initial data reported here are probably subject to as yet incompletely characterized "memory" effects.

These limitations are explicitly noted so that users of the data reported here, particularly modelers, will exercise appropriate caution in any quantitative applications of the time-concentration profiles for refined model validation purposes. More completely characterized data, which are being generated under the ongoing program, will be presented in a future summary report.

II. EXPERIMENTAL AND ANALYTICAL METHODS

A. Experimental Facilities and Methods

As described briefly in Section I-B, the evacuable chamber was used in conjunction with the solar simulator for the work carried out in this program. The evacuable chamber⁷ is a cylindrical, aluminum alloy cell, 1.37 m in diameter and 3.96 m long (surface-to-volume ratio 3.41 m^{-1}) with the interior coated in FEP-Teflon. The ends of the chamber consist of grid structures each of which holds sixteen 33 x 33 cm quartz windows (see Figure 1). Each window is individually Viton O-ring sealed to the grid, and the grids are bolted in turn to the ends of the chamber through O-ring sealed flanges. Thermal fluid passages welded to the exterior of the chamber permit temperature control over the region -20 to 212°F by means of an ethylene glycol-water mixture circulated through the passages from a remotely located heat exchanger and refrigeration system. The exterior of the chamber is insulated with Fiberglass (1 inch) and polyurethane (2 inches) and covered with an aluminum sheath. The major heat leak is through the uninsulated end grids. The volume of the chamber was experimentally determined to be 5775 liters (calculated 5860 liters).

The 25-KW solar simulator was designed to provide a collimated beam of light with overall intensity uniform to $\pm 10\%$ and with spectral fidelity to the deep-space solar spectrum, particularly in the 300-450 nm region. The compact optical system (see Figure 2) was obtained at the cost of a "hole" in the beam (due to the secondary mirror) which ranges from 25 cm to 11 cm over the length of the chamber. The collimation of the beam is approximate and although this requires a larger clearance between beam and chamber walls (beam diameter is 1.2 m) to minimize surface photochemistry, it also reduces the effect of shadows cast by the secondary mirror and the window grid structures. To provide attenuation of the beam in the 300 nm region, which is necessary to achieve good simulation of tropospheric spectral distribution, a 6.4 mm (0.25 inch) thick Pyrex pane was placed between the solar simulator and the quartz end windows of the chamber. A trichroic spectral filter, designed to remove some of the energy in the near-infrared portion of the spectrum (800-900 nm), was placed on the input side of the optical integrator for the experiments reported here (except as noted). The chamber and solar simulator characterization experiments are discussed in Section III.

Prior to each photochemical run the evacuable chamber was subjected to an overnight pump-out of at least 12 hours at pressures below $\sim 10 \mu$ (at ambient temperature) using a liquid ring roughing pump (to ~ 10 torr) and three cryosorption pumps used sequentially (to $1-10 \mu$). To achieve the desired temperature and humidity (85°F , 50% RH) of the matrix air, the pure air system⁸ (see Figure 3) was turned on at least 30 minutes prior to use and the chamber temperature controller was set to 85°F . The humidified air stream was brought via a wire-wrapped pipe to a manifold at port #9 (Figure 4) and allowed to by-pass the chamber through a flow meter into a tube equipped with the Brady array and a wet-dry bulb thermometer set (for two independent measurements of the relative humidity). This arrangement allowed adjustment of both the humidity and temperature of the air stream to the desired levels before diverting the flow into the chamber. The chamber was filled to a pressure of about 760 torr (about 25 torr above atmospheric) to allow installation of all sampling probes under positive pressure after which the chamber was opened to the atmosphere via a filter cannister filled with equal volumes of Purafil and charcoal. Room air is drawn through the filter cannister to make up sample volumes drawn by gas analyzers, thereby maintaining the chamber at ambient pressure throughout the experiment. (Prior to each experiment, the cannister is backflushed with pure air.)

Background levels of all species were determined prior to addition of the reactants. Primary injection of reactants was made at least 45 minutes and usually 60 minutes prior to the beginning of irradiation, with some small supplementary injections for concentration fine tuning made approximately 30 minutes prior to $t = 0$. Precision bore glass syringes were used for all dilutions and injections. All reactants were obtained from commercially available samples with the exception of NO_2 which was prepared by addition of NO to oxygen and formaldehyde which was obtained in the gas phase by heating of paraformaldehyde.

The solar simulator was brought to full power with the shutter in place at least 5 minutes prior to the start of irradiation. The chamber temperature control was switched to refrigerate at a setting of $80-82^\circ\text{F}$ just before (<5 minutes) the run.

Periodically, the chamber walls were cleaned by an evacuated bakeout at $>200^\circ\text{F}$ followed by an ozone conditioning at approximately 10-20 ppm (minimum

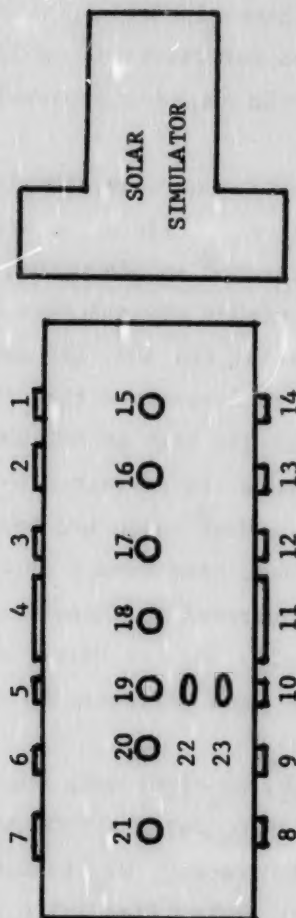


Figure 4. Port Locations on Evacuatable Chamber

of 12 hours). Details of other experimental procedures, such as actinometry runs, are described in Section III.

B. Analytical Methods

Analytical methods are described below for each species or variable monitored. A summary of these methods and the estimated precision and accuracy of each are given in Table 1. Data points were recorded every 15 minutes and continuous strip chart recordings were taken for ozone, oxidant, NO, NO₂ (or NO_x) and CO. The individual and total sampling rates for the instruments used in each run are given in Table 2, since the data given in Appendix C have not been corrected for dilution. A list of the calibration and conversion functions used in the computer processing of the raw data is given in Table 3.

OZONE was monitored by UV absorbance with a Dasibi Model 1003 analyzer and the digital readout was recorded. Calibration was checked periodically using the 2% neutral buffered potassium iodide method (NBKI). In 1974, a major effort was devoted to determining the accuracy of the 2% NBKI method by researchers at SAPRC as well as at the ARB, EPA and other agencies. As a result of these studies it has been determined that the 2% NBKI method yields ozone concentrations which are ~20-25% high at 50% RH.^{11,12} All ozone and oxidant concentrations reported here are corrected by a factor of 0.8.^{11,12}

OXIDANT was monitored using a Mast which had been calibrated in tandem with the Dasibi and data points were read from a strip chart. The response to O₃ was linear over the range observed in these runs (0 to 0.6 ppm). The calibration was checked periodically and the factor used is given on each data sheet. These data have also been corrected by a factor of 0.8 (see above).

Nitrogen oxides (NO, NO₂-PAN, NO_x-PAN) were monitored by chemiluminescence from the reaction of NO with O₃ using a TECO Model 14B analyzer or a Bendix analyzer. NO is measured directly, NO_x is measured by converting NO₂ to NO over a molybdenum (TECO) or carbon (Bendix) catalyst, and NO₂ is the electronically processed difference. Data points were read from a panel meter. In the course of this work it was found that commercial chemiluminescent NO-NO₂ analyzers are subject to interferences from PAN and organic nitrates and nitrites. A detailed investigation was carried out and it was demonstrated that PAN and ethyl nitrate are recorded quantitatively as NO₂.

Table 1. Physical and Chemical Parameters Measured in Evacuatable Chamber Studies

Parameter	Range	Methods	Precision	Accuracy
Ozone	0-20 ppm	Deslbi O ₃ Analyzer	±0.005 ppm	±5%
Total Oxidant	0-1 ppm	Master Analyzer	±0.01 ppm	±0.05 ppm
NO	0-10 ppm	Chemiluminescent	±1% F.S.	±5%
NO ₂	0-10 ppm	By difference	By difference	By difference
NO _x	0-10 ppm	±1% F.S.	±1% F.S.	±5%
CO	0-10 ppm	GC	±0.05 ppm	Limited by Calibration Standard
Individual HC's	0.5-1 ppb 1-2 ppb >2 ppb	GC GC GC	±15% ^a ±10% ±2%	Limited by Calibration Standard Typically ±5% ^a
PAN	0-150 ppb 150-300	GC	±5% ^a ±5%	±5% ^a ±10%
Formaldehyde	>20 ppb	Chromotropic Acid	±5%	±10%
Chamber Operating Pressure	700-800 torr	Validyne Gauge	±2%	±2%
Sample Temperature	-20 to +215°F	TC	±0.1°F	±2°F
Temperature at chamber walls	-20 to +215°F	TC	±0.1°F	±1°F
Relative Light Intensity	0-1 Solar Constant	Radiometer	±0.02 MW	-
Absolute Light Intensity	0-1 Solar Constant	NO ₂ Actinometry	±5%	b
Relative Humidity	0-100%	Brady Array	±1% R.H.	±5%

^aOptimum values; see Table 6 for values applicable to the data in this report. ^bSee discussion in Section III-B.

Table 2. Sampling Rates for EC Runs 1-60^a

EC Run Nos	Instrument Sampling Rates (ml/min)					Total
	Dasibi 1003	Mast	Teco 14B ^b	Beckman 6800	Bendix	
1-9	567	134	895	100		1696
10,12-14	567	134	690	100		1491
11	567	134	690	100	150	1641
16-17	567	134	586	100	150	1537
18-19,21	567	134	586	100		1387
38	567	134	895	100		1696
39-49, 51-57, 59-60	567	134	610	100		1411

^aTotal number of GC samples (including t = 0) is given in comments for each run; 0.2 l/sample. Volumes of HCHO samples (HCHO VOL) are given on data sheet for each run.

^bSampling rate adjusted by inclusion of needle valve in sampling line.

Table 3. Calibration and Conversion Functions

Parameter	Method	Raw Data	Equation	Range
TS1, TS2, TV1, TV2	ERC thermocouple	TC temp	$T(^{\circ}F) = 0.316 \cdot 1.0328 \text{ (TC Temp)}$	80-90 $^{\circ}F$
	Syston-Donner DVH	MV	$T(^{\circ}F) = 34.602(MV) + 32.819$	0.50-2.50 MV
	Doric	$^{\circ}C$	$T(^{\circ}F) = 1.8 (C + 17.778)$	
RH	Brady Array	V	$RH(X) = 21.93166 - 3.965519(V) + 4.34397(V)^2$ $= -47.909 + 46.304(V) - 4.5397(V)^2$ $= 1195 - 596.55(V) + 79.107(V)^2$	2.1 < V $\leq$ 3.21 3.21 < V $\leq$ 3.68 3.68 $\leq$ V $\leq$ 4.25
HCHO	Chromotropic acid	HCHO VOL	$HCHO \text{ (ppm)} = 2.0371 HCHO \text{ (}\mu\text{g)/HCHO VOL(L)}$	
		A(absorbance)	$HCHO \text{ (}\mu\text{g)} = 19.7738 A$	
PAN	GC-ECD	ht	1. $PAN(ppb) = .74065(ht) + .030919(ht)^2$	ht $\leq$ 100
			2. $PAN(ppb) = 2.3313(ht)$ $= 6.6616(ht) - 178.34$	ht $\leq$ 41.2 41.2 < ht $\leq$ 80
			3. $PAN(ppb) = 0.91418(ht)$ $= 1.451(ht) - 29.51$ $= .047927(ht)^2 - 9.1379(ht) + 549.95$	ht $\leq$ 55.0 55.0 < ht < 120.51 120.51 $\leq$ ht $\leq$ 180
			4. $PAN(ppb) = .0039665(ht)^2 + 0.3375(ht)$ $= 0.03742(ht)^2 - 5.8744(ht) + 278.74$	ht $\leq$ 75.88 75.88 < ht $\leq$ 180
			5. $PAN(ppb) = 0.0016962(ht)^2 + 0.34824(ht)$ $= 0.02971(ht)^2 - 9.0184(ht) + 769.71$	ht $\leq$ 145.44 145.44 < ht $\leq$ 250
			6. $PAN(ppb) = 0.0062197(ht)^2 + 0.53469(ht)$	ht $\leq$ 160
			7. $PAN(ppb) = 0.59838(ht)$ $= 0.032377(ht)^2 - 7.0028 + 444.9$	ht < 111.21 111.21 $\leq$ ht $\leq$ 160

and NO_x by these instruments.¹³ Thus all NO_2 and NO_x data reported here were corrected for 100% of the PAN and organic nitrate concentrations which were measured using independent methods. (Linear interpolation was made between PAN and nitrate data points.) Calibration was periodically checked using standard span gases and zero air produced by an EPA-approved zero air filter. After completion of this work it was found that the dilution flow system used in this calibration procedure led to a systematic error in the calculated concentrations. All NO , NO_2 , and NO_x data have been corrected by a factor of 1.2 for this error.

Carbon monoxide (CO) was monitored with a Beckman Model 6800 Air Quality Chromatograph and data points were read from the strip chart. The instrument was calibrated daily with a standard gas sample and the calibration factor is given on each data sheet.

The wall temperature (TW1) was read from the West controller on the evacuable chamber temperature control system for runs EC 1-9. Beginning with run EC-10, chamber wall temperature was measured with an iron-constantan thermocouple taped to a bare surface of the chamber shell (TW1 - South end of chamber near port 21 [see Figure 4]), and beginning with EC-13, a second thermocouple was added (TW2 - between ports 17 and 18).

The sample temperature (TS1) was monitored with an Electronic Research Co. (ERC) thermocouple inserted into the chamber at port #1 or #8 (indicated as NW and SE, respectively, on data sheets) via a glass probe for runs EC 5-9. A digital reading in degrees Fahrenheit was recorded (TC temp) and was corrected using a calibration function (Table 3) determined with a 19-35°C (0.01 degree/division) thermometer. Corrections for irradiation heating were applied as noted and were determined by briefly shuttering the simulator after the completion of the run. Beginning with EC-10, sample temperature was monitored with a radiation-shielded, iron-constantan thermocouple inserted via a glass probe to the dark space in the center of the chamber (TS1 - Port 8, to a depth of 33-1/4 inches from the insulation surface). Beginning with EC-13, a second thermocouple was added (TS2 - Port 1, to a depth of 32-1/4 inches).

Beginning with EC-10, the thermocouples were referenced to 32°F and the temperatures were read (a) in millivolts using a Systron-Donner DVM (EC 10-12, 20-25), (b) in degrees C using a Doric Model DS-350 Thermocouple Indicator-Type J (EC 13-19), or (c) in degrees F using a Doric (see b) (EC 38-60).

The data from (a) and (b) were converted to degrees F in the computer processing of the data (Table 3). The data from (c) were corrected based on the temperature recorded for an ice-water mixture.

Relative humidity (REL HUM) was measured with a Brady array mounted in a bulkhead fitting in port #10 (Figure 4). The response in volts (V) was recorded from a digital voltmeter and the data were converted to % RH using the calibration function supplied by the manufacturer (August 27, 1973). In June 1974 this calibration was verified over the region 10-60% RH and was corrected for the region 60-90% RH (Table 3).

Solar simulator power (SS POWER) levels were determined from the product of current and voltage values as read on panel meters. Simulator power was adjusted from run to run and within a run to obtain an average voltage from a reference radiometer (RADIOM) (placed at the far end of the chamber) of 1.80 ± 0.02 MV for runs 1-21 and 2.23 ± 0.02 for runs 38-60, respectively. Simulator powers required to obtain a canonical radiometer value were progressively higher from run to run due to slow degradation of the 25-KW Xe lamp and the solar simulator aluminized optics.

Formaldehyde (HCHO) was monitored using the chromotropic acid method.¹⁴ Air from the chamber was drawn through a bubbler containing distilled water at the rate of 1 l/min and the total volume per sample determined with a stopwatch. The HCHO-water solutions were developed using established procedures¹⁴ and were read on a Bausch and Lomb Spectronic 20. HCHO concentrations were calculated from absorbance (A) and volume of air sampled (HCHO VOL) (Table 3). The absorbance vs HCHO (μg) function was experimentally determined with the Spectronic 20 and the coefficient calculated from a least squares fit of the data. Formaldehyde concentrations are reported at the midpoint of the sampling time except for the $t = 0$ sample for which the entire sample is taken prior to the beginning of the irradiation.

Hydrocarbons and their oxidation products were monitored by gas chromatography (GC) with either flame ionization detection (FID)^{15,16} or electron capture detection (ECD).^{17,18} A description of the GC systems used and a list of the compounds which can be determined with each system are given in Table 4. After filling of the chamber with purified matrix air and prior to injection of the reactants, samples were run on each of the GC systems being used for that experiment to obtain background concentrations. Representative background concentrations of organic compounds are given in Table 5. A list

Table 4. Description of GC Systems and List of Compounds Monitored by Each

Abbreviation	GC System Description	Compounds Monitored
PM	5' X 1/8" SS Poropak N (100/120 mesh); N ₂ flow - 80 ml/min; 60°C; FID	methane, ethene, ethane, acetylene
DMS	36' X 1/8" SS 10% 2,4-Dimethylsulfolane on C-22 Firebrick (60/80 mesh), 0°C and 2' X 1/8" SS 10% Carbowax-E600 on C-22 Firebrick (60/80 mesh), ambient temp; N ₂ flow - 26 ml/min; FID	propane, propene, isobutane, n-butane, acetylene, 1-butene, isobutene, trans-2-butene, isopentane, cis-2-butene, n-pentane, 3-methyl-butene-1, 1,3-butadiene, methyl chloride, methylacetylene, 2,2-dimethylbutane, 1-pentene, 2-methyl-butene-1, trans-2-pentene, cis-2-pentene, 2,3-dimethylbutane, 3-methylpentane, 2-methyl-butene-2, 3-methyl- pentane, cyclopentane, n-hexane, cyclopentene, 2-methyl-butadiene-1,3
3-Part	10' X 1/8" SS 5% 1,2,3-tris(2-cyanoethoxy)- propane and 5' X 1/8" SS 5% Bentone 34 + 5% dinonyl phthalate both on RDS gas chrom W (100/120 mesh); 3' X 1/8" SS 10% Carbowax- E-600 on C-22 Firebrick (30/60 mesh); N ₂ flow - 36 ml/min; 65°C; FID	acetaldehyde, propionaldehyde, acetone, methyl ethyl ketone, benzene, toluene, ethyl benzene, p-, m-, and o-xylene, isopropylbenzene, n-propyl- benzene, p-, m-, and o-ethyl toluene, 1,2,3-, 1,2,4-, and 1,3,5-trimethylbenzene, o- and p- pinene
2-Part	3-Part without 1,2,3-tris(2-cyanoethoxy)- propane section; N ₂ flow - 50 ml/min; 60°C; FID	Same as 3-Part
C-20H	10' X 1/8" SS 10% Carbowax 20H on Chromosorb P (60/80 mesh); N ₂ flow - 25 ml/min; 70°C; FID	acetaldehyde, propionaldehyde, acetone, butyraldehyde, methyl ethyl ketone
C-400	12' X 1/8" Teflon 5% Carbowax E-400 on Chromosorb G (80/100 mesh); N ₂ flow - 90 ml/min; 28°C; ECD	PAN, organic nitrates

Table 5. Background HC Analyses for Selected Evacuatable Chamber Runs

Compound	Concentration (ppb)					
	EC-12	EC-21	EC-41	EC-49	EC-52	EC-60
Methane	848	704	1120	800	864	1112
Ethene	1.4	3.6	3.8	1.5	1.6	1.8
Ethane	13.2	5.5	13.2	10.0	9.4	9.8
Acetylene	24.4	5.4	3.0	1.6	1.8	2.0
Propane	4.0	6.4	8.4	7.9	8.8	8.4
Propene	0.6	1.0	0.5	1.4	0.4	0.4
Isobutane	0.3	0.1	0.2	0.1	0.3	0.5
n-Butane	0.4	0.3	0.9	1.5	0.4	0.4
Acetylene	22.6	5.5	3.0	2.5	2.0	1.6
1-Butene	0	0	0	0	0	0.2
Isobutene	0	0	0	0	0	0.1
Isopentane	0.5	0	0.5	0.2	0	0.4
n-Pentane	0.4	0	0	0	0	0.2
Acetaldehyde	1.0	1.5	1.5	4.8	2.6	1.8
Propionaldehyde	0.4	0.5	0.2	0.6	1.5	1.7
Acetone	1.5	2.6	2.2	2.0	2.4	2.0
Methyl Ethyl Ketone	0.5	0.2	10	0.9	1.0	1.3
Toluene	0.2	0.4	0.4	---	---	---
Butyraldehyde	---	---	---	0.3	0	0
Ethyl Benzene	0.2	0	1.0	---	---	---
p-Xylene	0.2	0	0.2	---	---	---
m-Xylene	1.6	2.2	0	---	---	---

of the hydrocarbons and oxidation products reported on the data sheets in Appendix C is given in Table 6 along with the method of analysis and estimated reliability of each measurement.

All identifications of compounds are based on retention time comparisons with authentic samples. The sampling and calibration procedures for FID instruments are described elsewhere.¹⁶ All compounds gave a linear response over the range of concentrations studied. Because of the limited range of linearity of the electron capture detector, a calibration curve for PAN response on the ECD-GC was determined periodically (Table 3). The PAN calibration used for each experiment is identified in the comment statements on the data sheet for that experiment.

Table 6. Methods and Reliability of Organic Reactant and Product Analyses

Compound	Abbreviation	EC Run Numbers	Method ^a	Calibration Accuracy ^b (%)	Sample Measurement Accuracy (%)
Propene	PROPENE	1-60	A	±5 ^d	±2
n-Butane	N-C4	1-60	A	±5 ^d	±2
Acetaldehyde	ACETALD	1-21 38-45 46-60	B C D	e,f e e	±10 ±20 ±10
Propionaldehyde	PROPALD	1-21 38-45 46-60	B C D	±10 ±20 ^{g,h} ±20 ^{g,h}	±20 ⁱ ±50 ⁱ ±50 ⁱ
Butyraldehyde	BUTYRAL	46-60	D	±20	±20
Acetone	ACETONE	1-21 38-45 46-60	B C D	±30 ^h ±30 ^h ±30 ^h	±10 ±20 ±20
Methyl ethyl ketone	MEK	1-21 38-45 46-60	B C D	±15 ^h ±15 ^h ±15 ^h	±5 ±10 ±5
Methyl nitrate	C1-N	39-60	E	±30 ^{j,k}	±50 ^m
Ethyl nitrate	C2-N	39-60	E	±10	±50 ^m
2-Butyl nitrate	C4-N-2	39-45 46-49	E	±30 ^{j,n} ±20 ^{j,n}	±30 ^o ±10
1-Butyl nitrate	C4-N-1	39-45 46-49	E	±30 ⁿ ±20 ⁿ	±50 ^p ±50 ^p
Peroxyacetyl nitrate	PAN	1-21 38-45 46-49 51-60	E	±50 ^{q,r} ±30 ^{q,r} ±50 ^{q,r} ±20	±5 ±30 ^o ±20 ±5

(continued)

Table 6. (continued)

- ^a A - FID, DMS column; B - FID, 3-Part column; C - FID, 2-Part column; D - FID, C-20M column; E - ECD, C-400 column, conditions variable--see notes below; see Table 4 for details of methods A-D.
- ^b Based on range of values observed in calibration samples.
- ^c Based on uncertainty associated with baseline determination for overlapping peaks and/or changing attenuation; $\pm 2\%$ under ideal conditions.
- ^d An error ($\sim 4\%$) in the volume of one of the calibration flasks used for these compounds was found and concentrations have been corrected where necessary.
- ^e Very difficult compound for which to obtain a reliable calibration due to changing peak shape and height. Calibration factors chosen were probably low (25-100%). Thus concentrations reported are high and should be corrected by a factor of .5-.75.
- ^f Propylene oxide has since been shown to have the same retention time as acetaldehyde on this column.
- ^g Very poor resolution of propionaldehyde and acetaldehyde on these columns.
- ^h Only a single calibration done using mixture on each column; accuracy assumed to be same as previously except for propionaldehyde which was doubled because of overlap with acetaldehyde.
- ⁱ On tail of acetaldehyde; a very small peak with large uncertainty in base line.
- ^j Authentic sample not available.
- ^k Used calibration factor for C2-N; will tend to overestimate C1-N.
- ^l C1-N and C2-N are small peaks overlapping each other and on the side of the air peak; baseline very uncertain.
- ^m Calibration factors based on those of other nitrates with correction for peak width.
- ⁿ PAN and C4-N-2 peaks overlap.
- ^p C4-N-1 small peak on tail of PAN; baseline very uncertain.
- ^q PAN calibration functions are given in Table 3.
- ^r Because of the instability of PAN, response per ppb during calibration tends to be on the low side. This is most noticeable for PAN calibr. 3 and 6, and PAN concentrations for runs using these calibrations may be high.

III. CHAMBER AND LIGHT SOURCE CHARACTERIZATION

A large number of characterization experiments were conducted both before and during the photochemistry program. These included determination of:

- A. Ozone half life
- B. Absolute light intensity
- C. Spatial homogeneity of light within the chamber
- D. Mixing and equilibration times
- E. Sampling rates
- F. Thermal oxidation of NO
- G. Surface effects

A. Ozone Half Life

The dark and light half lives of ozone in the evacuable chamber were initially determined under a variety of conditions pertaining to the pre-treatment of the chamber walls after "bakeout" (evacuation of the chamber to 1μ while simultaneously heating the walls to $>200^{\circ}\text{F}$). Table 7 summarizes the experimental conditions and results of these experiments, and a plot of ozone half life (light) vs. ozone preconditioning time is given in Figure 5. The results of ozone decay experiments carried out during the photochemistry program are given in Table 8. These were carried out after normal overnight evacuation of the chamber. Data plots for all ozone decay experiments are given in Appendix B.

It can be seen from these results that an overnight evacuation to 10μ at 85°F between runs was sufficient to return the chamber to a reproducible condition with respect to ozone light decay (half life = 4.2 ± 0.1 hours). However, ozone dark decay results were quite sensitive to the immediate prior history of the chamber walls and only those decays obtained following a light decay or a photochemical experiment are considered applicable to evaluating the dark ozone half life during photochemical runs. Ozone half lives measured in early experiments ranged from 7.5 to 9 hours (Table 7) while in the later runs they were 6.7-6.8 hours (Table 8). Since the latter were measured during the photochemistry program, an ozone dark half life of 6.8 hours is suggested as applicable to EC runs 1-60.

Table 7. Summary of Data for Ozone Half Life Determinations During 1973^a

Date	Conditions	Half Life ^b (hrs)
<u>1973</u>		
July 27	Dark decay, following overnight, 5 ppm O ₃ conditioning. 1.0 ppm O ₃ .	10.1 ± .2
31	Dark decay, 1.1 ppm O ₃ made previously by pure air photolysis with no filtering.	13.1 ± .3
August 6	a)Light decay, chamber conditioned 48 hrs with 15.6 ppm O ₃ . 1.1 ppm O ₃ , 25% RH, 85°F.	5.22 ± .05
	b)Dark decay following light decay.	7.50 ± .07
15	a)Light decay following k ₁ and thermal oxidation of NO experiments - no recent baking or O ₃ conditioning, .90 ppm O ₃ , 50% RH, 85°F.	4.3 ± .1
	b)Dark decay following light decay.	8.36 ± .09
17	a)Light decay following baking and pumping. 0.6 ppm O ₃ , 50% RH, 85°F.	1.3 ± .2
	b)Dark decay following light decay.	1.94 ± .04
18	Condition chamber with 16 ppm O ₃ , -50% RH, 85°F. Dark decay from 12 ppm O ₃ .	23.3 ± .4
20	a)Light decay following 40 hr, 16 ppm O ₃ conditioning. 1.0 ppm O ₃ , 50% RH, 85°F.	4.83 ± .07
	b)Dark decay following light decay.	8.96 ± .05
22	a)Dark decay for 2 hr, 12 ppm O ₃ conditioning.	11.3 ± .5
	b)Light decay, 1.0 ppm O ₃ , 50% RH, 85°F.	3.80 ± .07
	c)Dark decay following light decay.	7.00 ± .07
24	a)Dark decay for 4 hr, 13 ppm O ₃ conditioning.	19.4 ± .4
	b)Light decay, 1.0 ppm O ₃ , 50% RH.	4.08 ± .07
	c)Dark decay following light decay.	7.54 ± .04
28	Dark decay from 12 ppm O ₃ .	27 ± 1

^aPlots of these data (ln O₃ vs. time) with least squares fits to the data are given in Appendix B.

^bHalf life = 0.6931/k; uncertainties given are one standard deviation obtained by least squares fit of decay data.

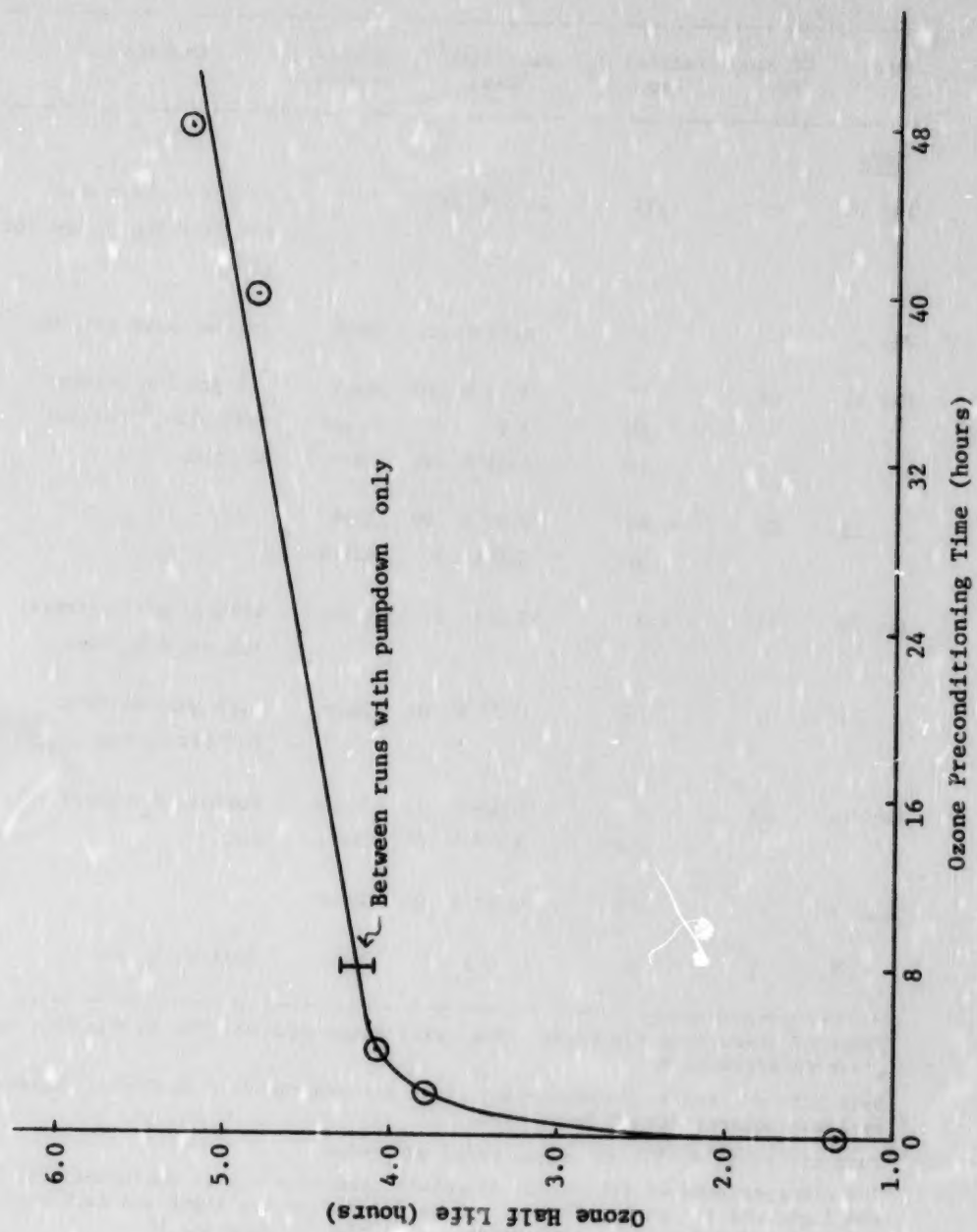


Figure 5. Ozone Half Life During Irradiation as a Function of Ozone Preconditioning Time

Table 8. Summary of Data for Ozone Half Life Determinations during 1974^a

Date	EC Run No.	Initial O ₃ (ppm)	Half Life ^b (hrs)	Light or Dark	Conditions ^c
<u>1974</u>					
Jan 18	--	.91	18.3 ± .1	Dark	in N ₂ ; follows ozone conditioning (8 ppm for 15 hr)
Feb 1	--	.62	6.70 ± .03	Dark	follows pure air run
Mar 11	19	.41	3.34 ± .03	Dark	.18 ppm PAN present
		.24	-9.8 ± .3	Light	initially; ^d follows
		.30	4.19 ± .08	Dark	NO _x run
12	20	.42	5.42 ± .09	Dark	
		.32	4.0 ± .1	Light	
Apr 19	31	1.2	19.1 ± .1	Dark	without gold mirrors; follows 4 k ₁ runs
26	33	.74	18.72 ± .08	Dark	with gold mirrors; follows k ₁ run
May 31	35	.74	4.18 ± .04	Light	follows O ₃ -alkene dark
		.30	6.77 ± .04	Dark	run
June 3	--	.75	9.82 ± .05	Dark	
7	37	1.5	11.3 ± .1	Dark	follows k ₁ run

^aPlots of these data (ln O₃ vs. time) with least squares fits to the data are given in Appendix B.

^bHalf life = 0.693/k; Uncertainties given are one standard deviation obtained by least squares fit of decay data.

^cPure air at 85°F, 50% RH unless noted otherwise.

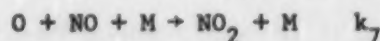
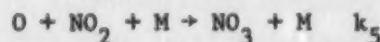
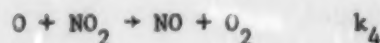
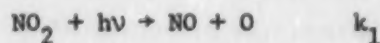
^dThe disappearance of PAN in the evacuable chamber was also monitored both in the light and the dark. The half lives for PAN in the light and dark were 5.7 ± .3 and 6 ± 1 hrs., respectively (see plot in Appendix B).

B. Absolute Light Intensity

The determination of k_1 for photolysis of NO_2 in a nitrogen atmosphere according to the method of Holmes et al.¹⁹ has been used to determine the absolute light intensity in the evacuable chamber at intervals throughout this program. The value of k_1 is calculated from the following equation¹⁹ assuming that no oxygen is present.

$$k_1 = \frac{1}{2\Delta t} \left\{ (1 + R_1 - R_2) \ln \frac{(\text{NO}_2)_o}{(\text{NO}_2)_f} + R_2 \left[\frac{(\text{NO}_2)_o}{(\text{NO}_2)_f} - 1 + (\text{NO})_o \left(\frac{(\text{NO}_2)_o - (\text{NO}_2)_f}{(\text{NO}_2)_o (\text{NO}_2)_f} \right) \right] \right\}$$

where $R_1 = k_5(M)/k_4$ and $R_2 = k_7(M)/k_4$. The reactions associated with the indicated rate constants are as follows:



Values for R_1 and R_2 were taken to be 0.27 and 0.16, respectively, as recommended by Holmes et al.¹⁹

Briefly, the general experimental procedures for actinometry experiments are as follows. The chamber was filled with nitrogen (99.995%) after evacuation to less than 10 μ . Approximately 20 torr of vacuum-distilled NO_2 in a 500 ml bulb was flushed into the chamber with nitrogen. After mixing was completed and constant initial values for NO and NO_2 were obtained, the solar simulator was brought up to the required power and a two minute irradiation carried out. Radiometer readings were taken every 10 seconds during the irradiation and solar simulator power settings were usually recorded initially and at the end of the irradiation. The final NO_2 concentration was allowed to stabilize and was read 3 to 10 minutes after the end of the irradiation. Using the initial NO and NO_2 and final NO_2 values, k_1 was calculated from the above equation.

Although O_2 can be effectively removed from the chamber by evacuation (to concentrations less than 10 ppm), as many as 50 ppm of O_2 may be present in the high purity (99.995%) nitrogen employed in the k_1 experiments.

Oxygen present in concentrations greater than ~10 ppm will lead to lower values for k_1 as they were calculated in this study relative to the true k_1 , which would be observed in the complete absence of O_2 .¹⁹ 50 ppm of O_2 will result in a value of k_1 ~10% low with respect to the true NO_2 photolysis rate.¹⁹

The conditions for each actinometry experiment and the resulting values of k_1 are given in Table 9. The k_1 data applicable to the photochemical studies reported here are presented graphically in Figures 6 and 7. To achieve higher k_1 values for a given solar simulator power, an Alzak reflector was placed at the far end of the chamber prior to EC-36. The correction of k_1 for addition of the spectral filter after EC-36 is based on the decrease in k_1 calculated from the transmission spectrum of the spectral filter.⁶ A weighted average of the transmission over the region 300-550 nm, where the weighting factors are proportional to the NO_2 extinction coefficient over the region, predicted a decrease in k_1 of 5.5%. This is consistent with the 5.7% change observed experimentally in EC-28 and 29 which were run with and without the spectral filter, respectively.

To facilitate use of the actinometry data, a summary of the recommended k_1 values applicable to each of the $HC-NO_x$ runs reported here is given in Table 10.

C. Spatial Homogeneity of Light within the Chamber

The intensity of light produced by the solar simulator across the radius of the evacuable chamber was monitored using a solar radiometer attached to a rod marked in inches. Distances were read from the flange face which is approximately 4 inches out from the inner wall of the chamber. This mapping was done at two locations (both with and without the reflector in place at the far end of the chamber). The first location, through port #1 (see Figure 4), was 16 inches from the window grid nearest the solar simulator, and the second, through port #9, was 116 inches from the window grid nearest the simulator. With the reflector in place, the intensity reported is the sum of the two radiometer readings obtained, first by facing the sensor toward the simulator, and then facing it toward the reflector.

The light intensity as a function of distance from the face of the port flange, both with and without the reflector, is shown in Figures 8 and 9,

Table 9. Actinometry Experiments in the Evacuable Chamber

Date	EC Run No.	(NO) ₀	Concentrations (ppm) (NO ₂) ₀	k_1^a (NO ₂) _f (min ⁻¹)	Radiometer (mV)	%S Power (KW)	Notes ^b
<u>1974</u>							
Jan 4	--	.006	2.34	1.128	.25	19.3	TECO ^c LPIR; 1603.5 cm ⁻¹
		--	.1476 ^d	.0718 ^d	.24	--	
Feb 28	--	.024	3.06	1.60	.22	19.2	
Apr 9	27	.018	3.67	2.14	.18	19.5	Clean primary mirror, reposition radiometer
10	28	.015	3.16	1.82	.18	20.1	Repeat
11	29	.018	3.630	2.34	.19	20.0	Spectral filter removed; 1.5 min irrad.
15	30	.013	2.92	1.84	.20	20.0	New primary mirror; 1.5 min irrad.
23	32	.017	3.451	1.97	.19	18.6	Repeat at lower power
June 5	36	.013	2.35	1.09	.26	17.0	End reflector added
				.24-.27 ^e			LPIR
				.24 ^f	2.2 ^g		Calculated for addition of spectral filter prior to EC-39
July 9	50	.008	1.94	1.014	.22	19.3	With spectral filter
19	58	.011	2.70	1.46	.20	19.3	

^aTwo min irradiation period unless noted otherwise; Calculated using $R_1 = 0.27$, $R_2 = 0.16$.
^bGiven conditions hold for subsequent runs until explicitly noted otherwise. ^cThermo Electron (TECO) Model 14B instrument.
^dOptical density. ^eUncertainty due to influence of changing water vapor concentration on infrared spectrum.
^fBased on a calculated 5.52 decrease in k_1 when spectral filter added. ^gBased on a series of radiometer readings at various SS power settings determined both with and without the spectral filter.

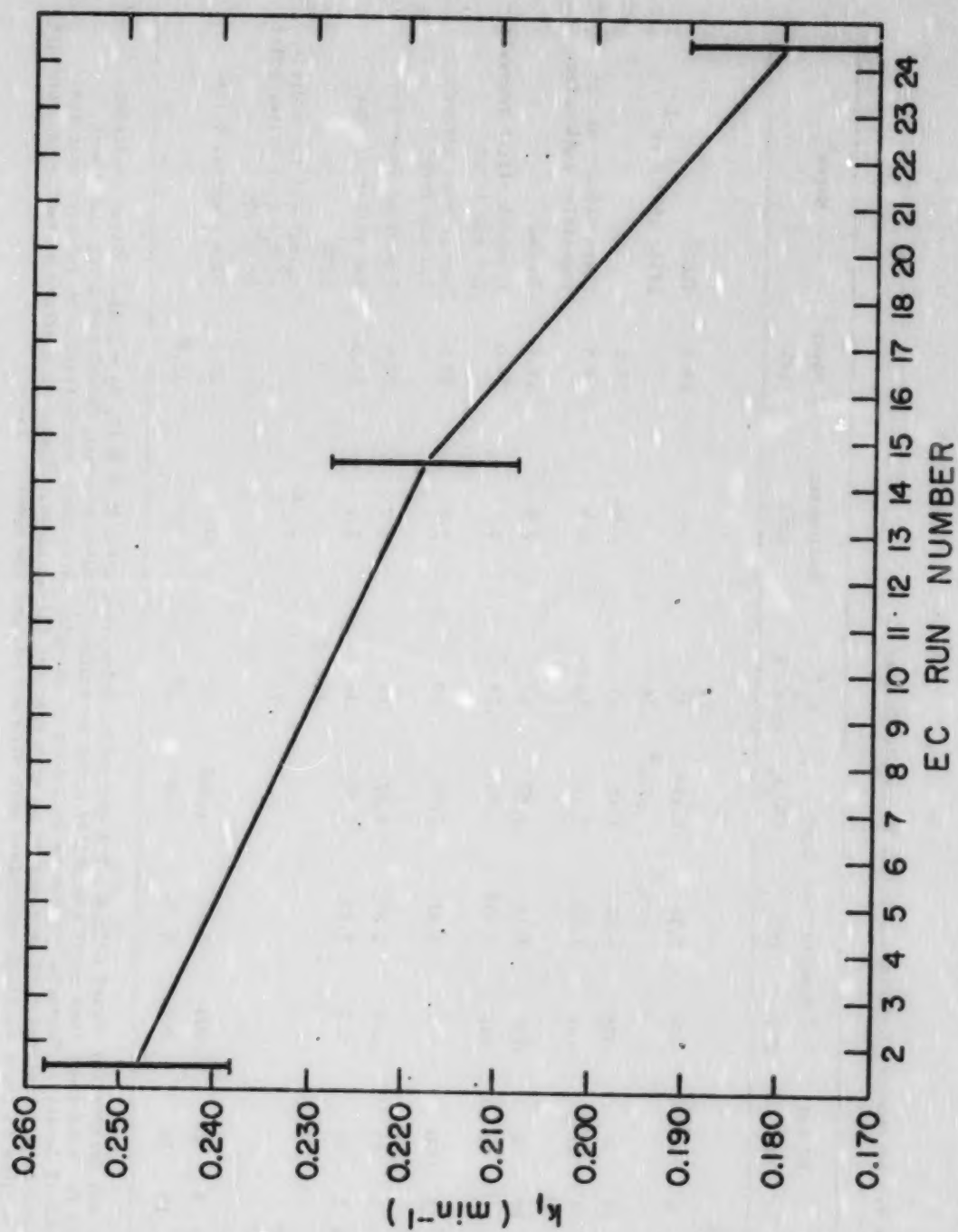


Figure 6. Values of k_1 as a Function of EC Run Number for EC-2 through EC-24 (Without End Reflector, Radiometer = 1.8 mv)

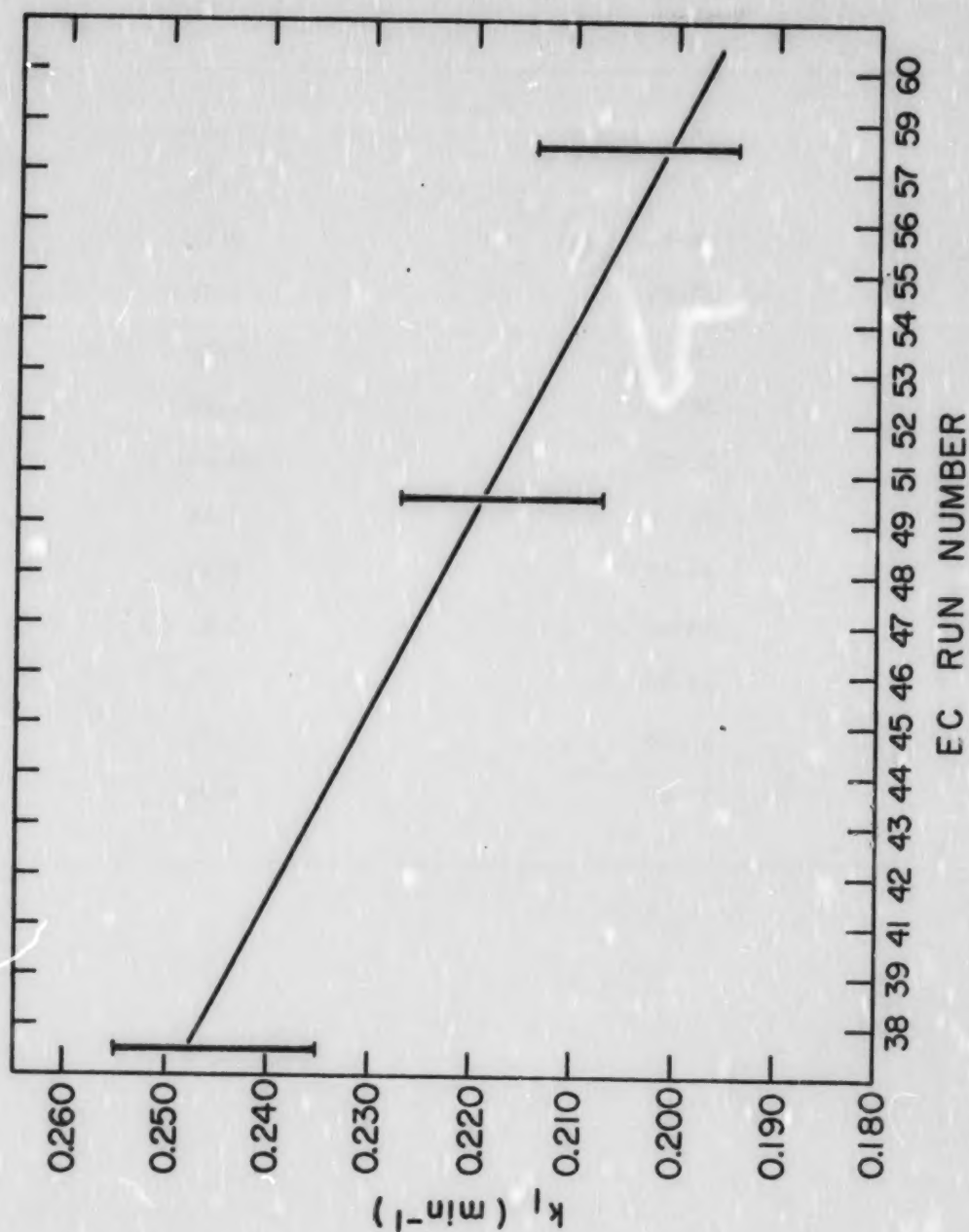


Figure 7. Values of k_1 as a Function of EC Run Number for EC-38 through EC-60
(With End Reflector, Radiometer = 2.2 mv)

Table 10. Absolute Light Intensity (k_1) for EC-1 through EC-60

EC Run Numbers	k_1 (min^{-1})
2	0.25
3-7	0.24
8-11	0.23
12-15	0.22
16-17	0.21
18-20	0.20
21-23	0.19
24	0.18
38-42	0.24
43-46	0.23
47-52	0.22
53-56	0.21
57-60	0.20

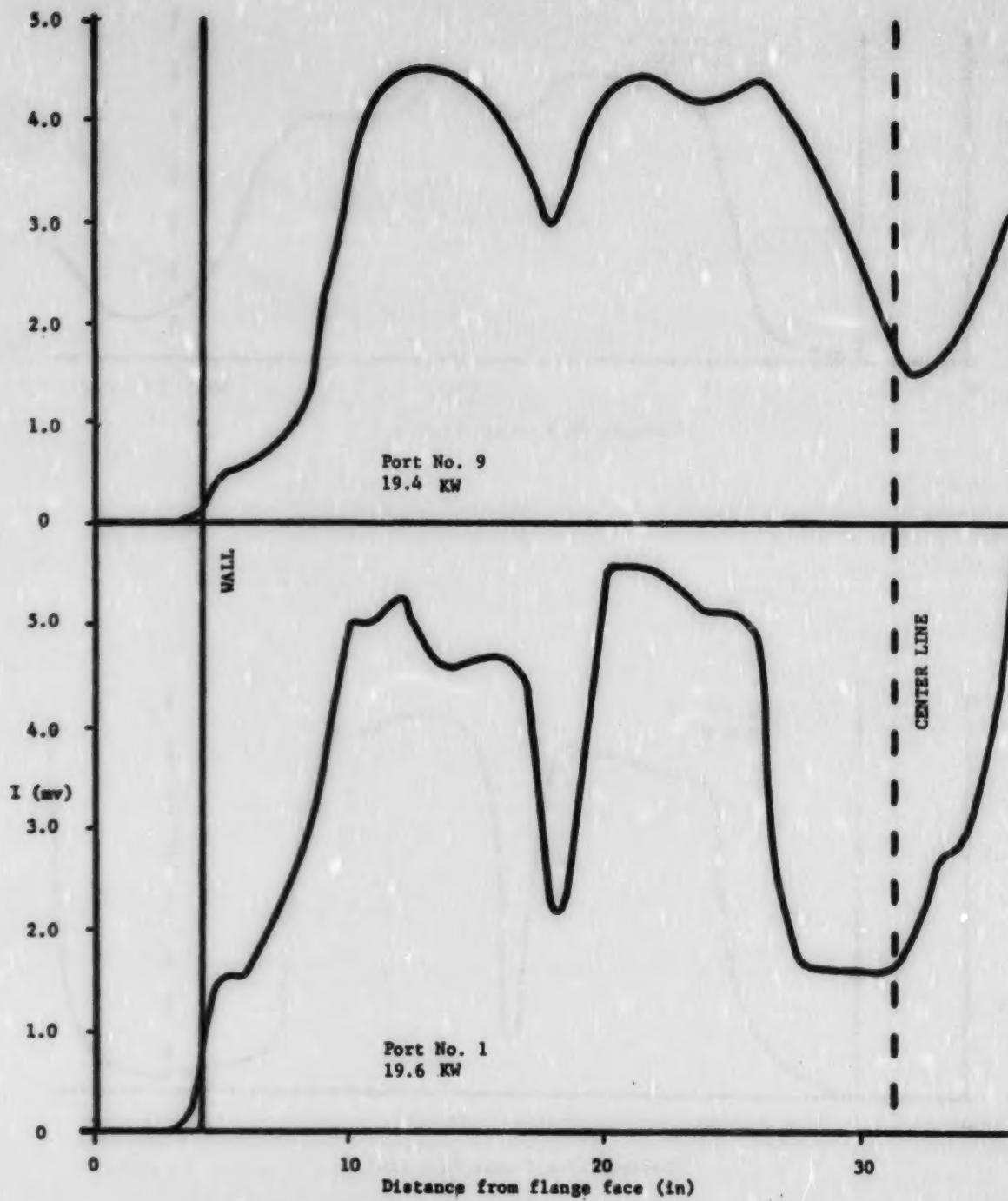


Figure 8. Spatial Distribution of Light within Evacuatable Chamber with Rear Reflector

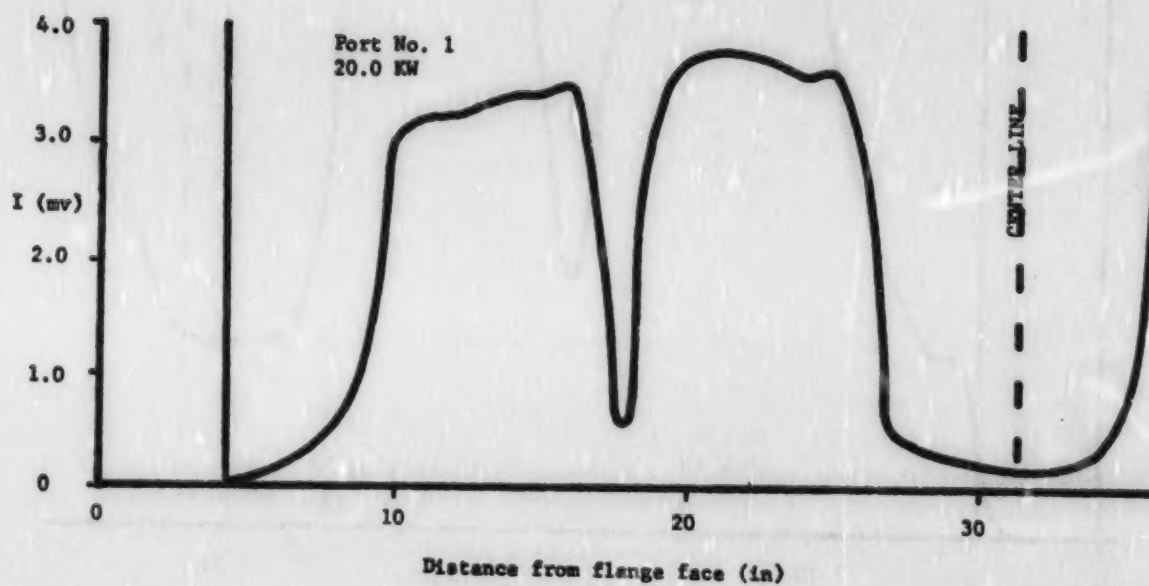
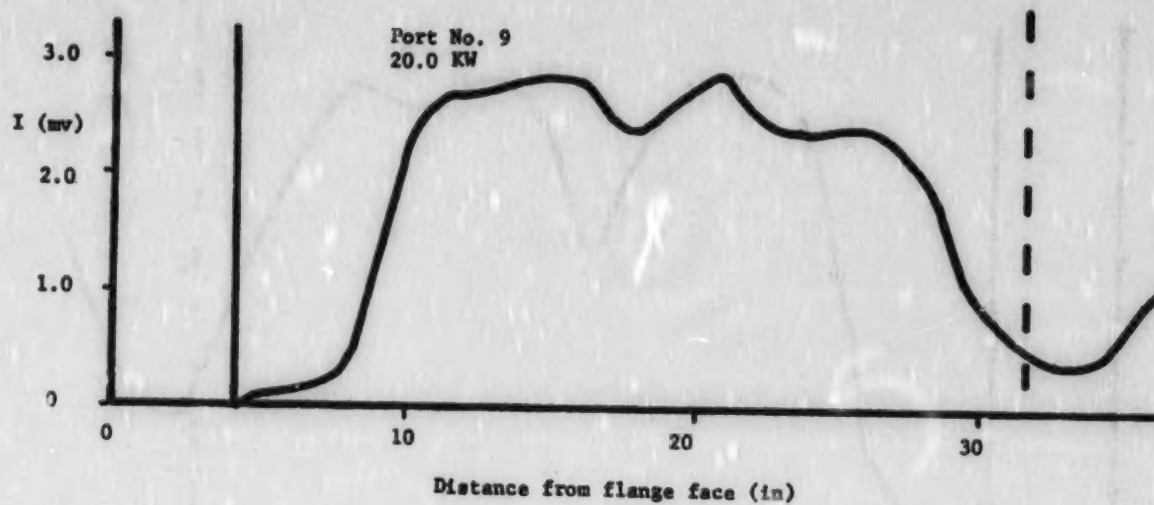


Figure 9. Spatial Distribution of Light within Evacuatable Chamber without Reflector

respectively. A more meaningful representation of light distribution throughout the volume of the chamber is shown in Figure 10 by plotting intensity as function of the radius squared.

The system was operated without the Alzac reflector through run EC-35 and with the reflector for runs EC-36 through 60.

D. Mixing and Equilibration Times

Two types of mixing problems have been considered: (1) the time required for an inert compound, injected at one location into the chamber, to achieve a uniform distribution throughout the chamber under both dark and irradiated conditions, and (2) the time required for a reactive species or product which is changing concentration during irradiation to equilibrate throughout the chamber volume (both dark and irradiated volumes) (see Section III-C).

Experiment 1-A (September 6, 1973): The chamber was filled with pure air. Some 30 minutes later (to allow time for minimization of any convection currents), 13.5 ml CH_4 was injected at sampling port #9. Samples for GC analysis were taken at 5 minute intervals for 30 minutes at port #9, via a syringe inserted through a septum. Then an additional aliquot of CH_4 (~10 ppm) was added and the solar simulator turned on (20 KW). Samples for GC analysis were taken at 1 or 2 minute intervals from both ports #1 and #9. Results are summarized in the following table.

Time (min)	CH_4 (ppm)	
	Port #9	Port #1
Dark 5	3.7	
15	2.9	
20	2.8	
25	2.8	
30	2.8	2.8
Light 1	4.8	4.8
2	15.4	13.8
3	12.8	14.1
4	14.4	15.4
6	16.3	15.4
8	16.7	16.0
10	16.3	16.0
12	16.3	16.3
14	16.3	16.3
24	16.3	16.3

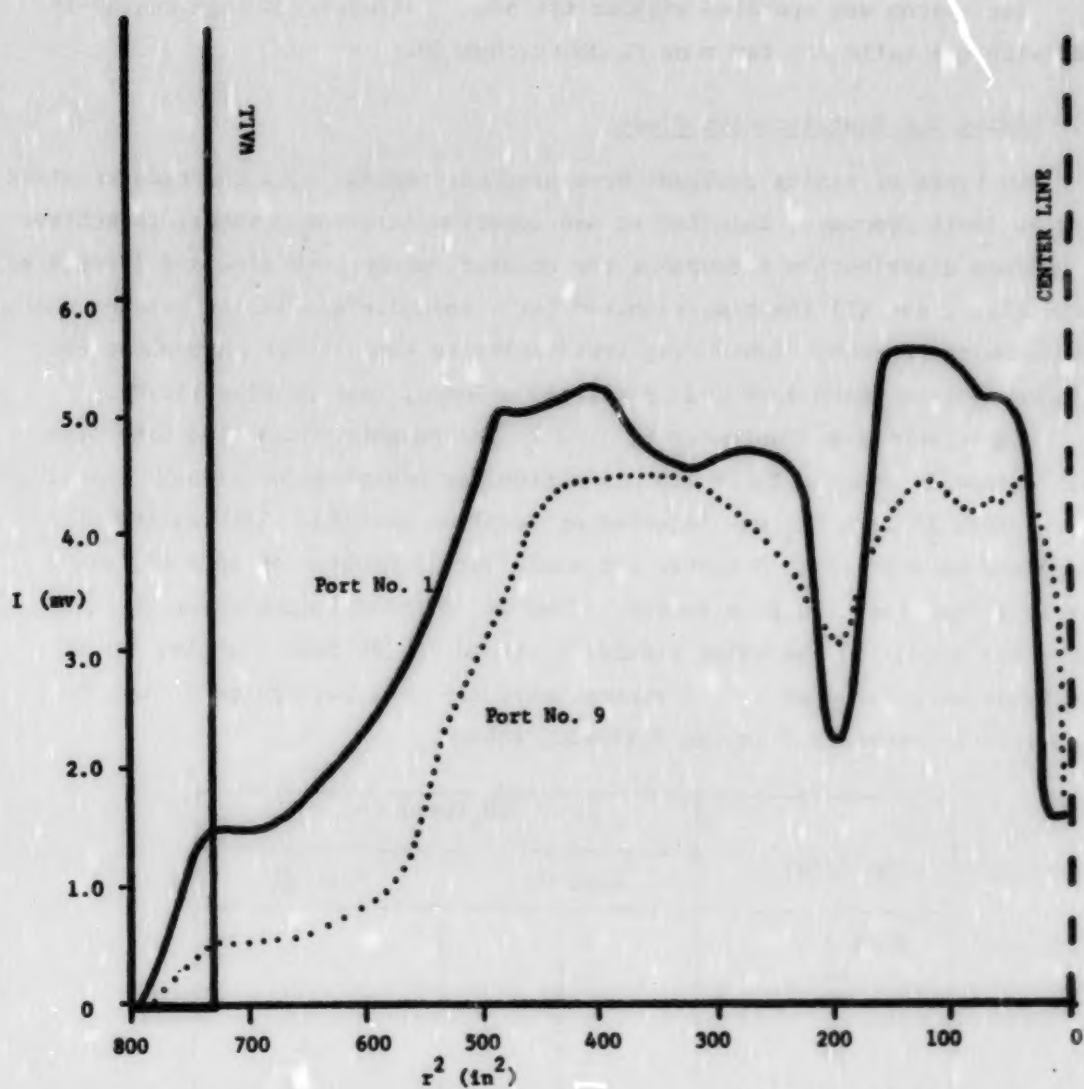


Figure 10. Spatial Distribution of Light Intensity, with Rear Reflector, as a Function of Radius²

Experiment 1-B (September 12, 1973): The chamber was filled with pure air and ~5 ppm CH_4 was added at port #9. Samples were taken at ports #9 and 18 (2 ft. glass probe). The CH_4 concentration as a function of time at each location is shown in Figure 11.

Experiment 1-C (September 13, 1973): The chamber was filled with 27.5°C dry air. After turning on the solar simulator (18 KW), ~2.5 ppm CH_4 was added at port #9. Samples were taken at ports #9, 1, and 18. The solar simulator was turned off and an additional 2.5 ppm CH_4 was added. Samples were taken as above. Figures 12 and 13 show the results of these light and dark runs, respectively.

Experiment 2 (April 9, 1974): To determine the bulk mixing rate, data were used from an actinometry experiment in which the NO concentration was monitored as a function of time, before, during and after a 120-second photolysis of ~2 ppm of NO_2 . This record (see Figure 14) was obtained in the fast response (~ few seconds) mode of a commercial chemiluminescent NO- NO_2 analyzer, drawing sample from a tube extending to the half radius of the chamber through a port at the end nearest the simulator.

The deviations from a smooth curve (and their frequency) during and immediately after the 2-minute photolysis are indicative of the rate of bulk mixing of NO in the chamber. The convergence to an invariant final NO concentration within one to two minutes after the photolysis is evidence that the time constant for bulk homogeneous mixing in the chamber is approximately one minute.

E. Sampling Rates

A comparison of the experimentally determined and calculated dilution (sampling) rate for the evacuable chamber was made using CO as an inert tracer. The chamber was filled with purified air and 4-6 ppm CO. Sampling was carried out as usual with all instruments (Bendix, Mast, Dasibi, and Beckman) on the chamber and periodic formaldehyde and GC samples were taken. The following table summarizes the results of two runs and shows that as expected for an evacuable chamber, dilution rates are equal to the sum of the instrument sampling rates, and there is no "leak" rate due to the chamber itself (as is the case for conventional chambers).

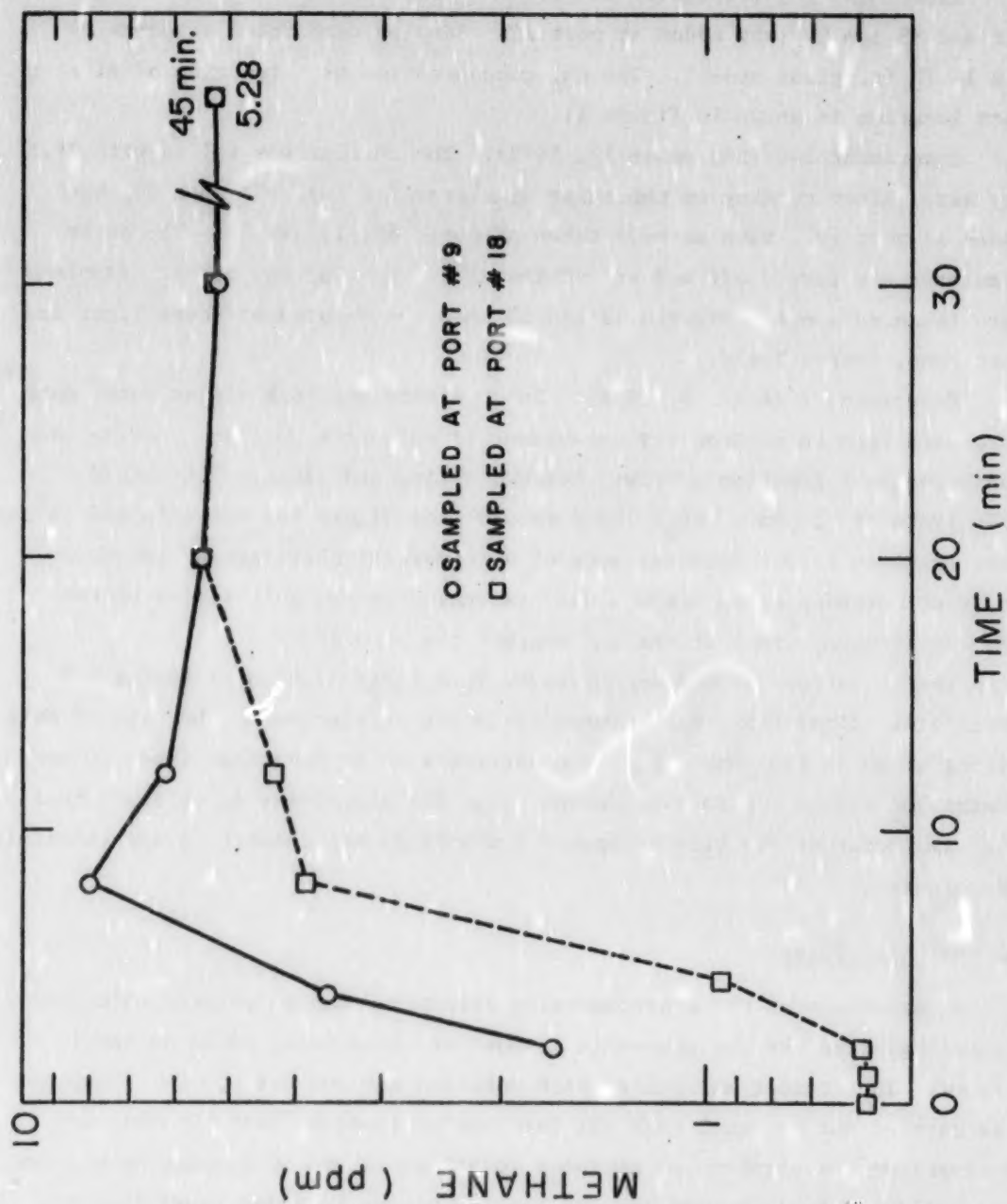


Figure 11. Methane Concentration as a Function of Time at Two Locations in the Dark
(Injection at Port #9)

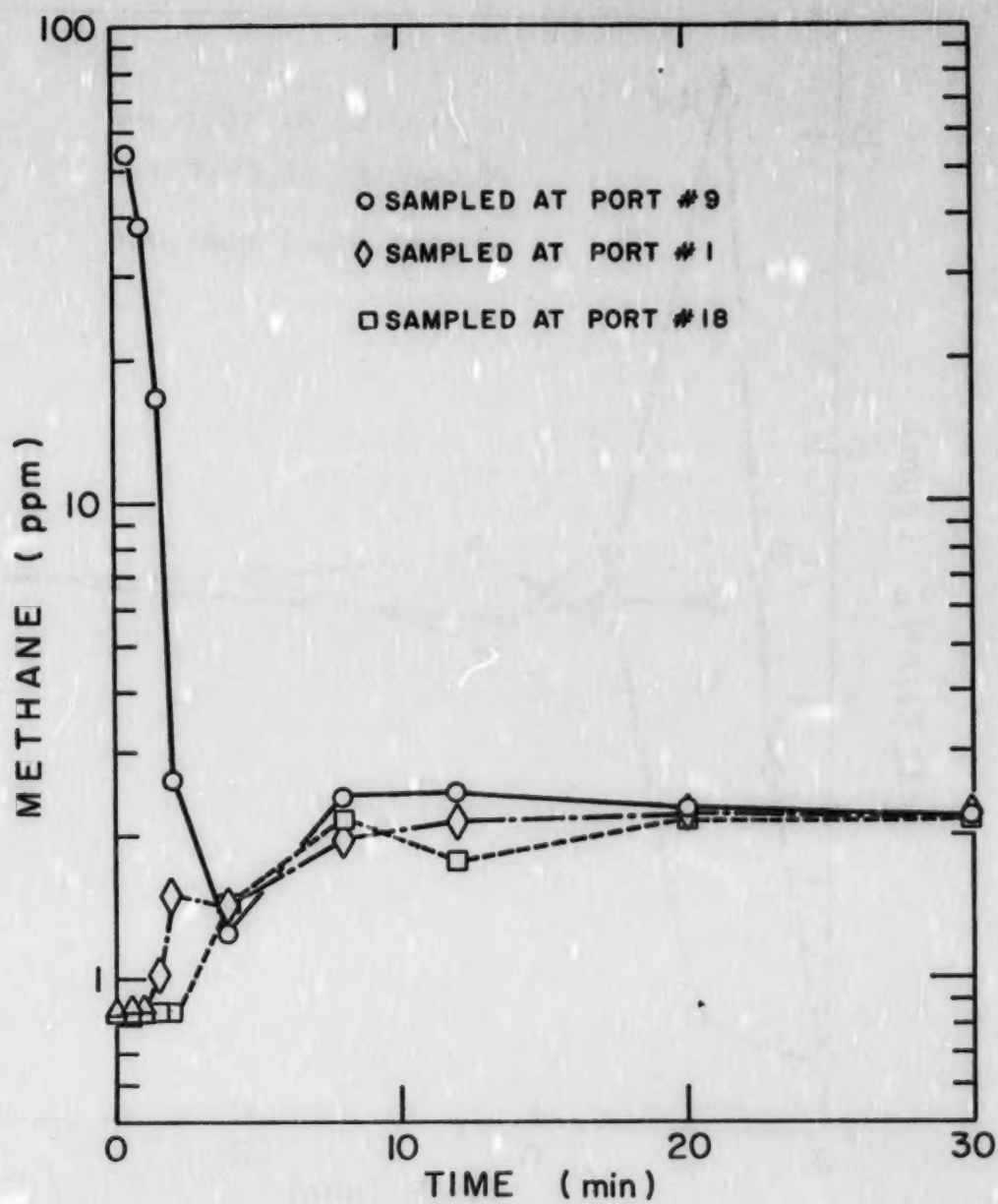


Figure 12. Methane Concentration as a Function of Time at Three Locations under Solar Simulator Irradiation (Injection at Port #9)

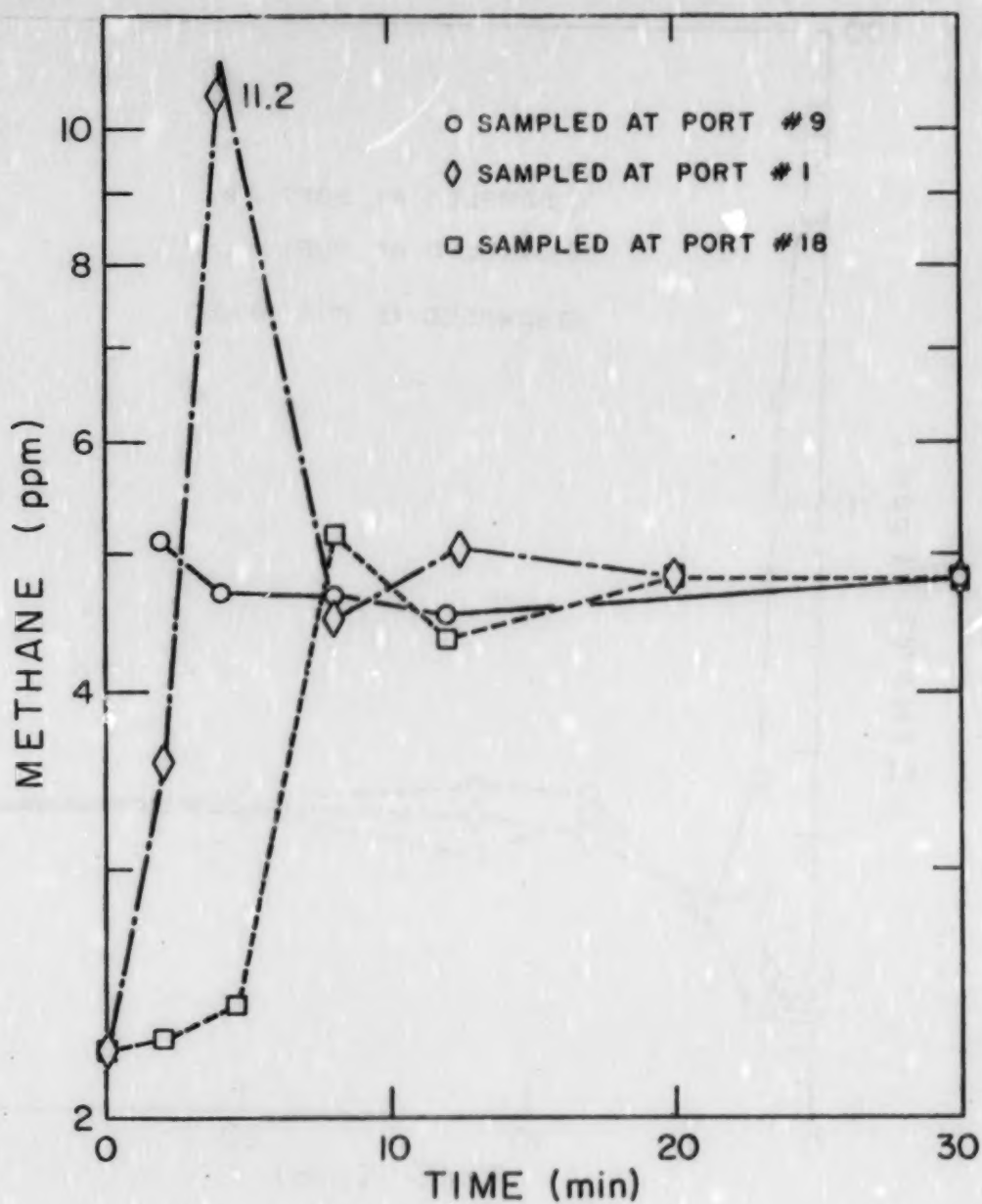


Figure 13. Methane Concentration as a Function of Time at Three Locations in the Dark (Injection at Port #9)

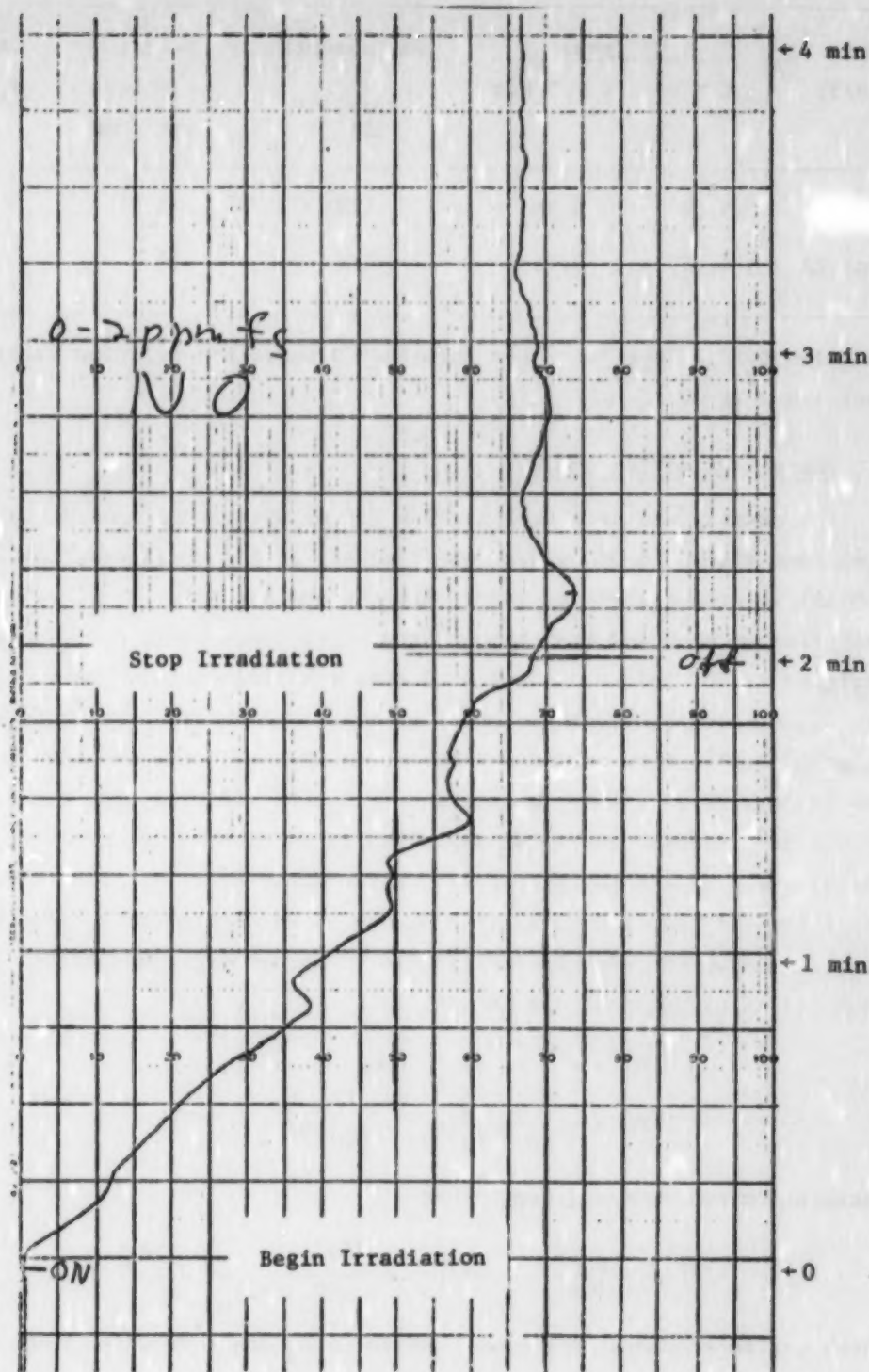


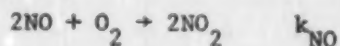
Figure 14. Strip Chart Recording of NO Concentration During a k_1 Determination (EC-27) as Monitored by a TECO 14B NO_x Analyzer (2 ppm Full Scale)

Date (1973)	CO (ppm)		Experimental k_{dilution}^a (hr ⁻¹)	Volume Sampled per Hour	Calculated k_{dilution}^b (hr ⁻¹)
	t = 0	t = 5 hrs			
Aug 8	5.69	5.35	.012	73 l	.0126
Sept 21	4.05	3.78	.014	78 l	.0134

$k^a = (\ln C_0/C_t)/(t-t_0)$. $k^b = \ln(1+F) \approx F$ where F = fraction sampled per hour and F is < 0.1

F. Thermal Oxidation of NO

The chamber was evacuated to 20 μ (after ozone conditioning for ~60 hrs) then filled to 500 μ with purified air at 50% RH (August 13, 1973). NO (60 ml) in nitrogen was expanded into the chamber from a 5 liter bulb, the bulb flushed once and the chamber brought to atmospheric pressure with purified air at 50% RH. After a 25 minute mixing period, the NO, NO₂, NO_x and O₃ data were recorded on strip charts for 19 hours. No ozone was observed during this period. Plots of $\ln[\text{NO}_x]$ vs. time and $1/\text{NO}$ vs. time are given in Figure 15. Calculation of k_d for dilution from the former gives 0.0072 hr⁻¹ (least squares slope) which is in reasonable agreement with that calculated from instrument sampling rates (0.0074 hr⁻¹). The rate constant (k_{NO}) for the reaction of NO with O₂ can be calculated with correction for dilution using the kinetic analysis for combined first and second order terms given by Campbell and Thrush.²⁰



$$\frac{-d\text{NO}}{dt} = 2k_{\text{NO}}[\text{NO}]^2[\text{O}_2] + k_d[\text{NO}]$$

Integration and rearrangement gives

$$\left(\frac{k_d + 2k_{\text{NO}}[\text{O}_2][\text{NO}]_t}{[\text{NO}]_t} \right) \left(\frac{[\text{NO}]_o}{k_d + 2k_{\text{NO}}[\text{O}_2][\text{NO}]_o} \right) = e^{k_d t}$$

which can be expanded as a power series in k_d and t in which powers of $k_d t$ above the first can be neglected. Rearrangement gives

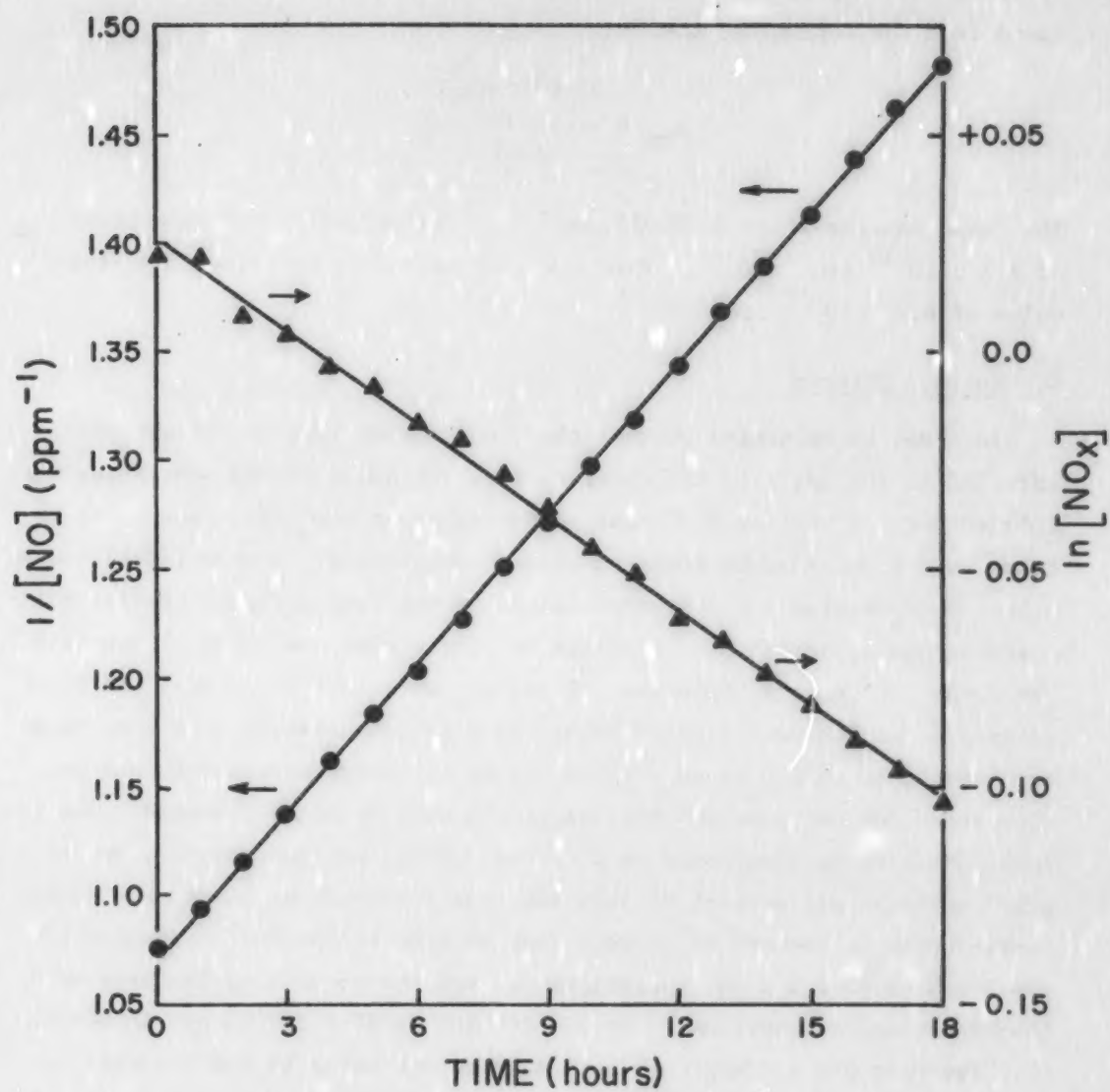


Figure 15. Thermal Oxidation of NO

$$\frac{1}{[\text{NO}]_t} = \frac{1}{[\text{NO}]_o} + \left(2k_{\text{NO}}[\text{O}_2] + \frac{k_d}{[\text{NO}]_o} \right) t + \left(2k_{\text{NO}}[\text{O}_2] + \frac{k_d}{[\text{NO}]_o} \right) \frac{k_d t^2}{2}$$

The linearity of the plot of $1/\text{NO}$ vs. time indicates that the term in t^2 can be considered negligible over this time period and, thus, k_{NO} can be calculated from the following equation.

$$k_{\text{NO}} = \frac{\text{slope} - \frac{k_d}{[\text{NO}]_o}}{2[\text{O}_2]}$$

The least squares slope is $0.023 \text{ ppm}^{-1} \text{ hr}^{-1}$ which leads to a calculated k_{NO} of $6.1 \times 10^{-10} \text{ ppm}^{-2} \text{ min}^{-1}$. This compares favorably with the literature²¹ value of $6.7 \times 10^{-10} \text{ ppm}^{-2} \text{ min}^{-1}$.

G. Surface Effects

In order to determine whether there was either loss or release of material at the walls of the chamber, pure air and nitrogen photolyses were carried out, as well as dark runs conducted under conditions identical to those used in irradiated runs. A propene-n-butane- NO_x system (EC-1) and an n-butane- NO_x system (EC-40) were studied in the dark with all species monitored as usual (detailed data sheets for these runs are given in Appendix B). The losses of propene, n-butane, CO and NO_x were $10 \pm 2\%$ in EC-1 and EC-40 after 4.5 and 6 hours, respectively. This is in agreement with loss to be expected based on the known sampling rates for these experiments and no measurable loss of reactant species to the wall could be detected. The products observed in irradiated runs (acetaldehyde, propionaldehyde, methyl ethyl ketone) were present at very low levels throughout these dark runs. Somewhat larger amounts of acetone (not an expected product) appeared (26 and 7 ppb in EC-1 and 40, respectively), but not as much as is observed in the photochemical experiments (e.g., 140 ppb in EC-2 and 16 ppb in EC-44).

Two pure air irradiations were carried out early in the program, one with and one without a Pyrex filter. Only 0.05 ppm of ozone was found after 7 hours in the former (July 13, 1973), but the latter gave 1.1 ppm ozone in 3.75 hours (August 1, 1973). Two later Pyrex-filtered runs, EC-9 and EC-38, both gave ~0.04 ppm ozone after 6 hours. Also, ~30 ppb of acetone appeared

during EC-9 and ~20 ppb during EC-38. The latter is about the same level of acetone observed in the photochemical runs for both n-butane- and propene-NO_x systems during the last half of this study (EC 39-60) and suggests that acetone is not a product of the photooxidations of these systems. Irradiation of the chamber (EC-6) when filled with nitrogen led to the appearance of only ~0.02 ppm of ozone and 12 ppb of acetone.

IV. PHOTOOXIDATION OF HYDROCARBON-NO_x SYSTEMS

A. Experimental Design

The reactivity of individual hydrocarbons has been studied as a function of the HC/NO_x ratio over a range of hydrocarbon concentrations using a factorial design block as the basis for systematically selecting the most efficient and relevant set of concentrations of reactants, given that only a limited number of runs can be made for each system. The factorial design blocks showing the desired initial conditions for the study of the propene-NO_x and n-butane-NO_x systems including the effect of added aldehydes, are shown in Figure 15. The experimental run numbers corresponding to each set of conditions are also shown. The actual initial concentrations of hydrocarbon, NO, NO₂, and NO_x for each of these experiments are summarized in Tables 11 and 12. In addition to the above factorial design experiments, experiments designed to test the effect of changing other parameters on the propene-NO_x system were carried out. These included varying initial NO/NO₂ ratio, changing temperature, and addition of n-butane. Initial conditions for these runs are given in Table 13. The light intensity applicable to each experiment has been given in Table 10 (Section III-B) and the ozone half-life in the dark is estimated to be 6.8 hours.

B. Results

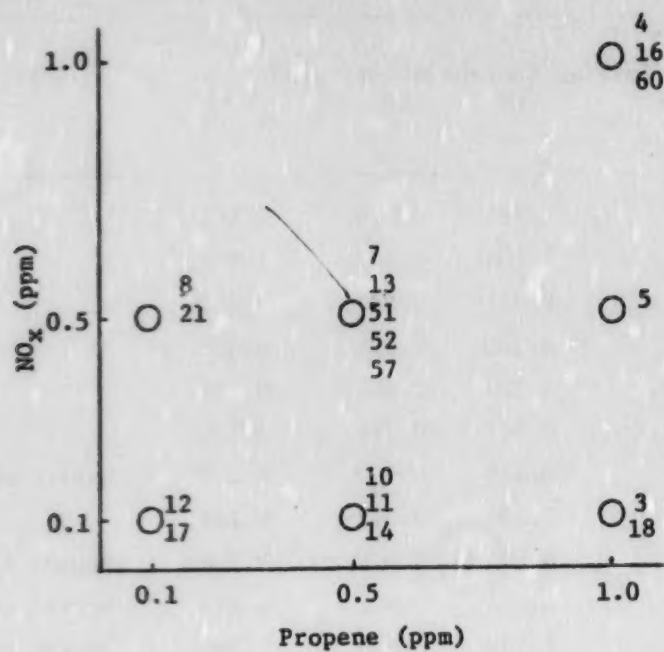
Detailed data tabulations for each of the runs described above are given in Appendix C. Plots of reactants and products are given in Appendix D: for each run the first plot gives ozone, NO, NO₂ and PAN; the second plot, hydrocarbon, formaldehyde, acetaldehyde and other products.

Propene-NO_x System. A summary of selected reactivity parameters for the propene-NO_x experiments is given in Table 14. The tendency of the later runs to be less reactive is accounted for in part by the decreasing light intensity as measured by k_1 during the course of these runs (see Section III-B) and in part by a presumed decrease in short wavelength UV radiation (relative to longer wavelengths) due to aging of solar simulator optical surfaces.

n-Butane-NO_x System. Selected reactivity parameters for the runs in the n-butane-NO_x block are given in Table 15. The problem of a "memory effect" was clearly seen in the first experiment after a run with added aldehyde (compare runs 46 and 49 with 41 and 47). An extended pumpdown carried out

Figure 16. Factorial Design Blocks

PROPENE



n-BUTANE

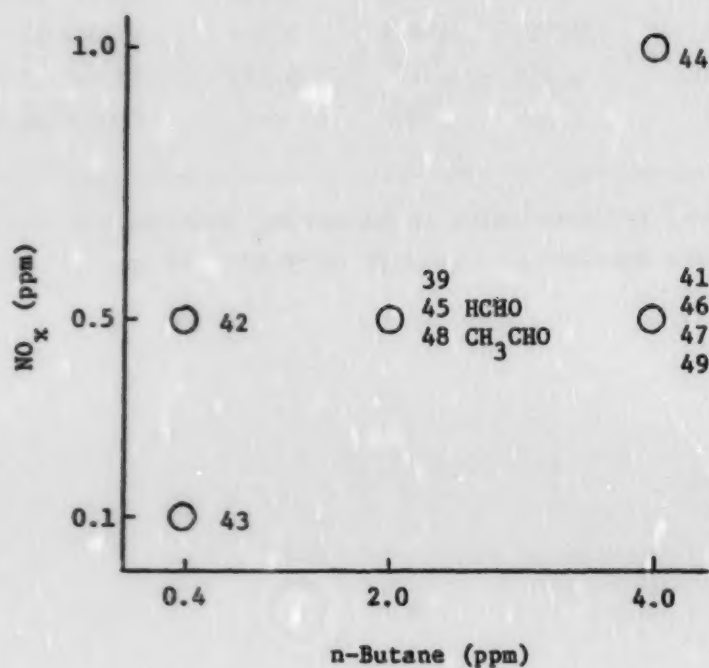


Table 11. Initial Concentrations of Primary Species for the Propene-NO_x Factorial Design Experiments

EC Run Number	Initial Concentration (ppm)				Notes
	Propene	NO	NO ₂	NO _x	
3 ^a	0.904	0.161	0.019	0.181	
4 ^a	0.860	1.055	0.122	1.182	
5 ^a	0.970	0.551	0.047	0.599	
7 ^a	0.470	0.530	0.055	0.588	
8 ^a	0.110	0.527	0.060	0.588	
10 ^a	0.440	0.107	0.014	0.120	
11	0.447	0.115	0.020	0.136	Repeat EC-10
12	0.082	0.106	0.012	0.118	
13	0.500	0.504	0.078	0.586	Repeat EC-7
14	0.504	0.104	0.012	0.118	Repeat EC-11
16	1.036	1.122	0.156	1.260	Repeat EC-4
17	0.103	0.106	0.014	0.120	Repeat EC-12
18	0.972	0.106	0.014	0.120	Repeat EC-3
21	0.104	0.558	0.066	0.623	Repeat EC-8
51	0.552	0.516	0.049	0.565	Repeat EC-13
52	0.551	0.524	0.060	0.586	Repeat EC-51
57	0.531	0.538	0.060	0.598	Repeat EC-52
60	1.082	1.105	0.145	---	Repeat EC-16

^a NO-NO₂-NO_x analyzer malfunctioning in NO and NO_x modes during these runs. These species estimated to be high by ~0.03-0.05 ppm.

Table 12. Initial Concentrations of Primary Species for the n-Butane-NO_x
Factorial Design Experiments

EC Run Number	Initial Concentration (ppm)				Notes
	n-Butane	NO	NO ₂	NO _x	
39	2.200	0.547	0.060	0.605	
41	4.030	0.524	0.068	0.593	
42	0.385	0.542	0.059	0.599	
43	0.380	0.126	0.013	0.137	
44	3.920	1.140	0.132	1.260	
45	1.940	0.552	0.062	---	0.129 ppm HCHO
46	3.990	0.527	0.061	0.587	Repeat 41
47	3.900	0.534	0.062	0.599	Repeat 41
48	1.940	0.535	0.059	0.594	0.245 ppm CH ₃ CHO
49	4.120	0.553	0.059	0.611	Repeat 41

Table 13. Initial Concentrations of Primary Species for Propene-NO_x
Experiments in which Selected Parameters are Varied

EC Run Number	Initial Concentrations (ppm)				Notes
	Propene	NO	NO ₂	NO _x	
2 ^a	0.51 ^b	0.600	0.086	0.684	0.50 ppm n-butane ^b
53	0.551	0.552	0.077	---	100°F
54	0.514	0.527	0.060	0.586	60°F
55	0.545	0.480	0.121	0.601	NO/NO ₂ = 4
56	0.531	0.311	0.283	0.599	NO/NO ₂ = 1
59	0.530	0.136 ^b	0.461 ^b	---	NO/NO ₂ = .25

^a NO-NO₂-NO_x analyzer malfunctioning in NO and NO_x modes during this run.
These species estimated to be high by ~0.03-0.05 ppm.

^b Estimated.

Table 14. Selected Reactivity Parameters for the Propene-NO_x System

Run No.	Initial Conditions					Reactivity Parameters				
	Intended HC/NO _x	Propene (ppm)	NO _x (ppm)	HCHO (ppb)	CH ₃ CHO (ppb)	NO ₂ ppm	O ₃ max time	O ₃ max ppm	O ₃ max time	HC consumed ppm
EC-3	10	.904	.181	0	2	.100	30	.274	60	.803
EC-18		.972	.120	0	3	.094	30	.189	90	.804
EC-11	5	.447	.136	0	2	.112	30	.229	135	.412
EC-14		.504	.118	8	2	.090	30	.185	105	.438
EC-5	2	.970	.599	0	3	.401	60	.473	165	.958
EC-12	1	.082	.118	0	1	.075	90	.157	315	.078
EC-17		.103	.120	0	2	.095	60	.139	360	.100
EC-4	1	.860	1.18	0	3	.782	120	.540	360	.849
EC-16		1.036	1.26	15	7	.946	105	.478	315	1.012
EC-60		1.082	1.25	0	2	.836	195	.238	360	.911
EC-8	0.2	.110	.588	7	5	.280	~240	.084	360	.101
EC-21		.104	.623	3	8	.273	~330	.007	330	.089
EC-7	1	.470	.588	-	3	.372	105	.382	360	.461
EC-13		.500	.586	38	5	.425	60	.367	270	.491
EC-51		.552	.565	0	4	.407	105	.294	360	.519
EC-52		.551	.586	0	2	.409	165	.306	420	.497
EC-57		.531	.598	0	2	.408	150	.243	360	.473

Table 15. Selected Reactivity Parameters for the n-Butane-NO_x System

Run No.	03 time (min)	NO ₂ max ppm time	O ₃ 6 hr	HC consumed ppm %	Comment
Effect of added aldehydes (2 ppm n-butane, 0.6 ppm NO _x)					
EC-39	135	-	.073	.42 19	0.13 ppm HCHO 0.25 ppm CH ₃ CHO
EC-45	105	282	.138	.44 23	
EC-48	75	232	.163	.36 19	
Memory effect (4 ppm n-butane, 0.6 ppm NO _x)					
EC-41	75	208	.237	.92 23	1st run after HCHO
EC-46	15	162	.252	.81 20	2nd run after HCHO
EC-47	75	228	.189	.74 19	1st run after CH ₃ CHO
EC-49	15	137	.286	.92 22	
Basic block (decreasing HC/NO _x and concentration)					
n-butane NO _x					
EC-41	75	208	.237	.92 23	4.03 .593
EC-44	150	-	.015	.87 22	3.92 1.26
EC-39	135	-	.073	.42 19	2.20 .605
EC-43	60	259	.120	.111 29	.380 .137
EC-42	210	-	.006	.099 26	.385 .599

before EC-49 seemed to have no significant effect on this problem.

Initial NO₂ and Temperature Effects. Reactivity parameters for runs carried out at varying initial NO₂/NO ratios and temperatures are given in Table 16. Because ~50% relative humidity was maintained in all experiments, the results for runs at the different temperatures may include effects due to the change in water concentration. Based on the initial temperatures and RH's, the water content for runs EC-52, 53, and 54 were 13.5, 32.4, and 6.4 torr, respectively.

Table 16. Effects of Changing Temperature or Initial NO/NO₂ Ratio on the Propene-NO_x System

Run No.	Initial Conc (ppm)		O ₃ Time (min) >0 ppb ^a .08 ppm	NO ₂ Peak		O ₃ 6 hr	HC Consumed	
	HC	NO _x		ppm	time		ppm	%
EC-52	.551	.586	60	.409	165	.272	.497	90
EC-53 101°F	.551	.629	60	.464	90	.410	.543	99
EC-54 61°F	.514	.586	30	.377	165	.130	.412	80
EC-55	.545	.601	30	.421	105	.294	.516	95
EC-56	.531	.599	15	.437	75	.309	.498	94
EC-59	.530	.597 ^b	15	.494	30	.324	.502	95
EC-57	.531	.598	90	.408	150	.243	.473	89

^aTime at which first measurable ozone (~1 ppb) appeared.

^bEstimated.

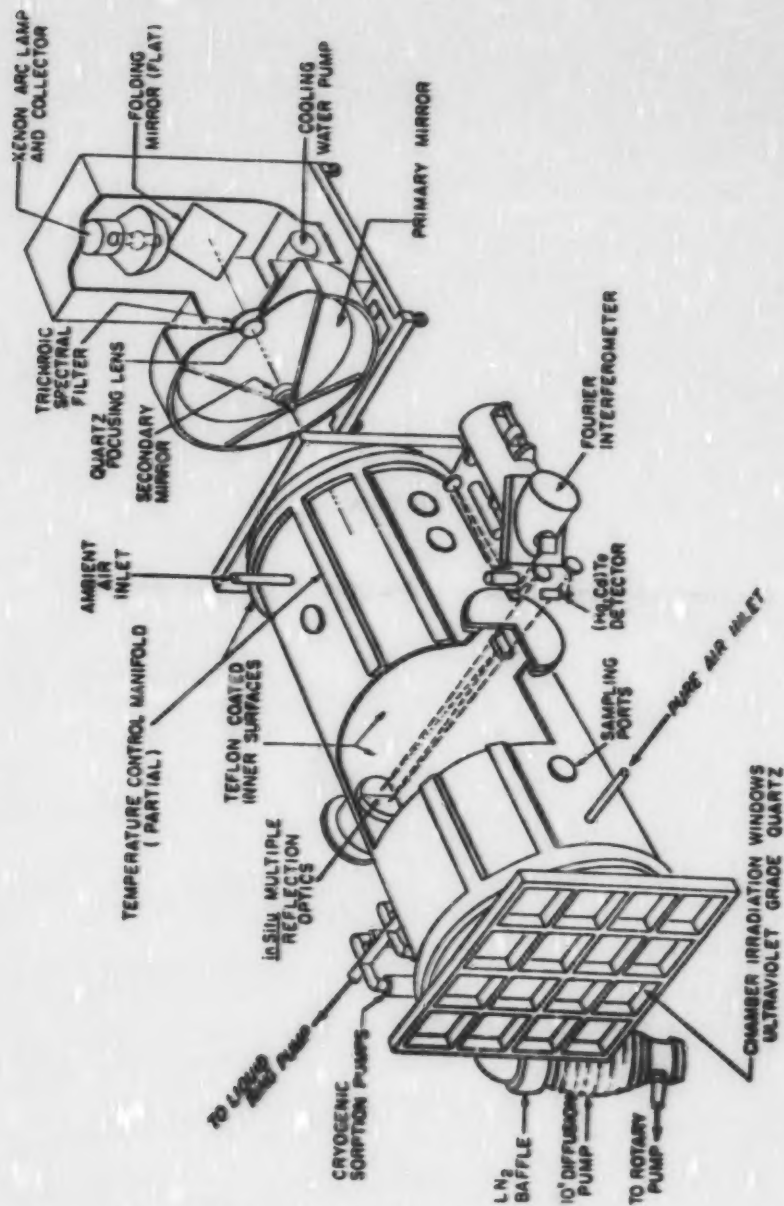
V. REFERENCES

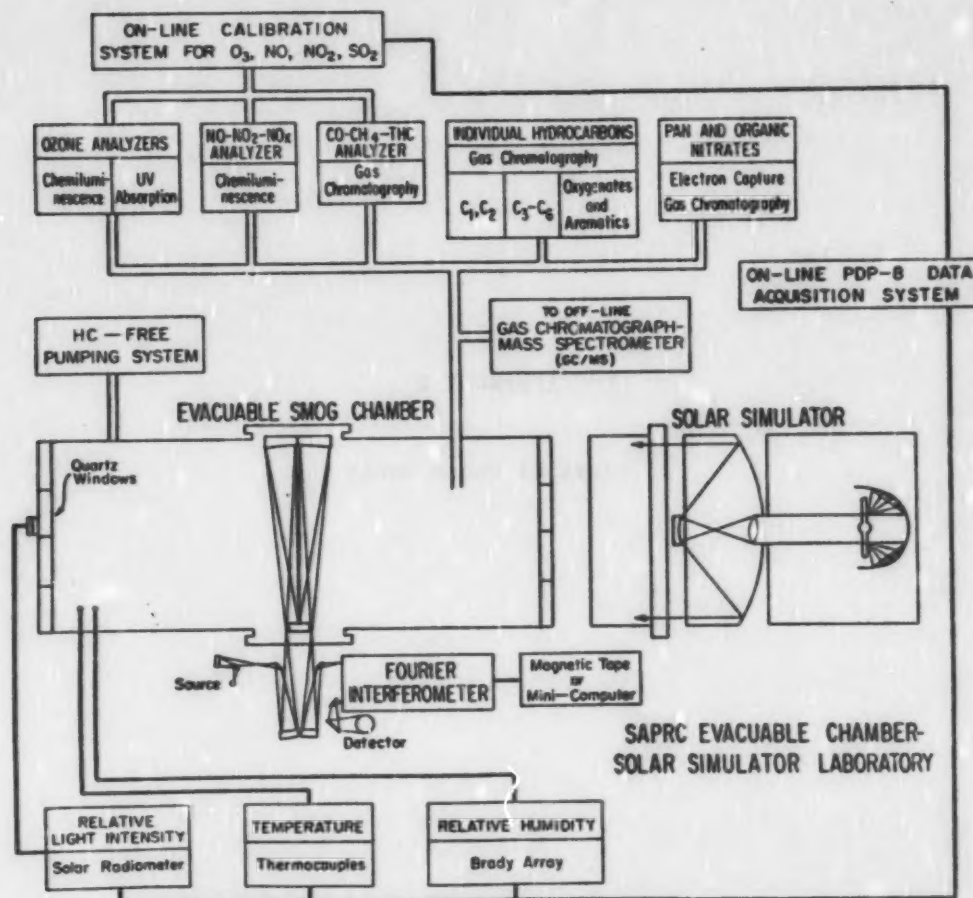
1. M. C. Dodge, "Workshop on Mathematical Modeling of Photochemical Smog; Summary of the Proceedings," EPA-R4-73-010, Environmental Protection Agency, January, 1973.
2. J. G. Calvert, K. L. Demerjian and J. A. Kerr, "The Mechanisms of Photochemical Smog Formation," in International Symposium on Air Pollution 1972 -- Tokyo Proceedings, pp. 465-504 (1972).
3. K. L. Demerjian, J. A. Kerr and J. G. Calvert, "The Mechanism of Photochemical Smog Formation" in Advances in Environmental Science and Technology, Vol. 4, J. N. Pitts, Jr. and R. L. Metcalf, Eds., pp. 1-262, Wiley-Interscience, New York, N. Y., 1974.
4. J. N. Pitts, Jr., "The Effects of Fuel Modification and Control Systems on Exhaust Emissions and their Reactivity in Photochemical Smog," Proposal to the California Air Resources Board, 1970.
5. J. N. Pitts, Jr., P. J. Bekowies, A. M. Winer, G. J. Doyle, J. M. McAfee and K. W. Wilson, "The Design and Construction of an Environmental Chamber Facility for the Study of Photochemical Air Pollution," Final Report, California ARB Grant No. 5-067-1, in draft.
6. J. H. Beauchene, P. J. Bekowies, J. M. McAfee, A. M. Winer, L. Zafonte and J. N. Pitts, Jr., "A Novel 20 KW Solar Simulator Designed for Air Pollution Research," Proceedings of Seventh Conference on Space Simulation (NASA Special Publication 336), Los Angeles, California, November 12-14, 1973, pp. 811-825.
7. J. N. Pitts, Jr., P. J. Bekowies, G. J. Doyle, J. M. McAfee, and A. M. Winer, "An Environmental Chamber-Solar Simulator Facility for the Study of Atmospheric Photochemistry," in preparation.
8. G. J. Doyle, P. J. Bekowies, J. M. McAfee, A. M. Winer and J. N. Pitts, Jr., "A Charcoal-Adsorption Air Purification System for Chamber Studies Investigating Atmospheric Photochemistry," Environ. Sci. Technol., accepted for publication.
9. T. A. Hecht, J. H. Seinfeld and M. C. Dodge, "Further Development of Generalized Kinetic Mechanism for Photochemical Smog," Environ. Sci. Technol., 8, 327 (1974).
10. H. Niki, E. E. Daby and B. Weinstock, "Mechanisms of Smog Reactions," Adv. Chem. Series No. 113, 16 (1972).
11. J. N. Pitts, Jr., J. M. McAfee, W. D. Long and A. M. Winer, "A Long-Path Infrared Spectroscopic Investigation at Ambient Concentrations of the 2 Σ Neutral Buffered Potassium Iodide Method for Determination of Ozone," Environ. Sci. Technol., 10, 787 (1976).

12. State of California Air Resources Board, "Comparison of Oxidant Calibration Procedures," Final Report of the Ad Hoc. Measurement Committee, February 3, 1975.
13. A. M. Winer, J. W. Peters, J. P. Smith and J. N. Pitts, Jr., "Response of Commercial Chemiluminescent NO-NO₂ Analyzers to Other Nitrogen-Containing Compounds," Environ. Sci. Technol., 8, 1118 (1974).
14. R. G. Smith, R. J. Bryan, M. Feldstein, B. Levadie, F. A. Miller, E. R. Stephens and N. G. White, "Tentative Method of Analysis for Formaldehyde Content of the Atmosphere (Colorimetric Method)," H.L.S. 7, (1) Supplement, 87 (1970).
15. E. R. Stephens and F. R. Burleson, "Analysis of the Atmosphere for Light Hydrocarbons," J. Air Pollut. Contr. Assoc., 17, 147 (1967).
16. E. R. Stephens, "Hydrocarbons in Polluted Air," Summary Report, Coordinating Research Council, Project CAPA-5-68, June, 1973; NTIS No. PB 230 993/AS.
17. E. F. Darley, K. A. Kettner, and E. R. Stephens, "Analysis of Peroxyacyl Nitrates by Gas Chromatography with Electron Capture Detection," Anal. Chem., 35, 589 (1963).
18. E. R. Stephens and M. A. Price, "Analysis of an Important Air Pollutant: Peroxyacetyl Nitrate," J. Chem. Educ., 50, 351 (1973).
19. J. R. Holmes, R. J. O'Brien, J. H. Crabtree, T. A. Hecht and J. H. Seinfeld, "Measurement of Ultraviolet Radiation Intensity in Photochemical Smog Studies," Environ. Sci. Technol., 7, 519 (1973).
20. I. M. Campbell and B. A. Thrush, "The Recombination of Nitrogen Atoms and the Nitrogen Afterglow," Proc. Roy. Soc., A296, 201 (1966).
21. "Chemical Kinetic and Photochemical Data for Modeling Atmospheric Chemistry," NBS Technical Note 866, R. F. Hampson, Jr., and D. Garvin, Eds., June, 1975.

APPENDIX A

Current Configuration of Evacuatable Chamber Facility

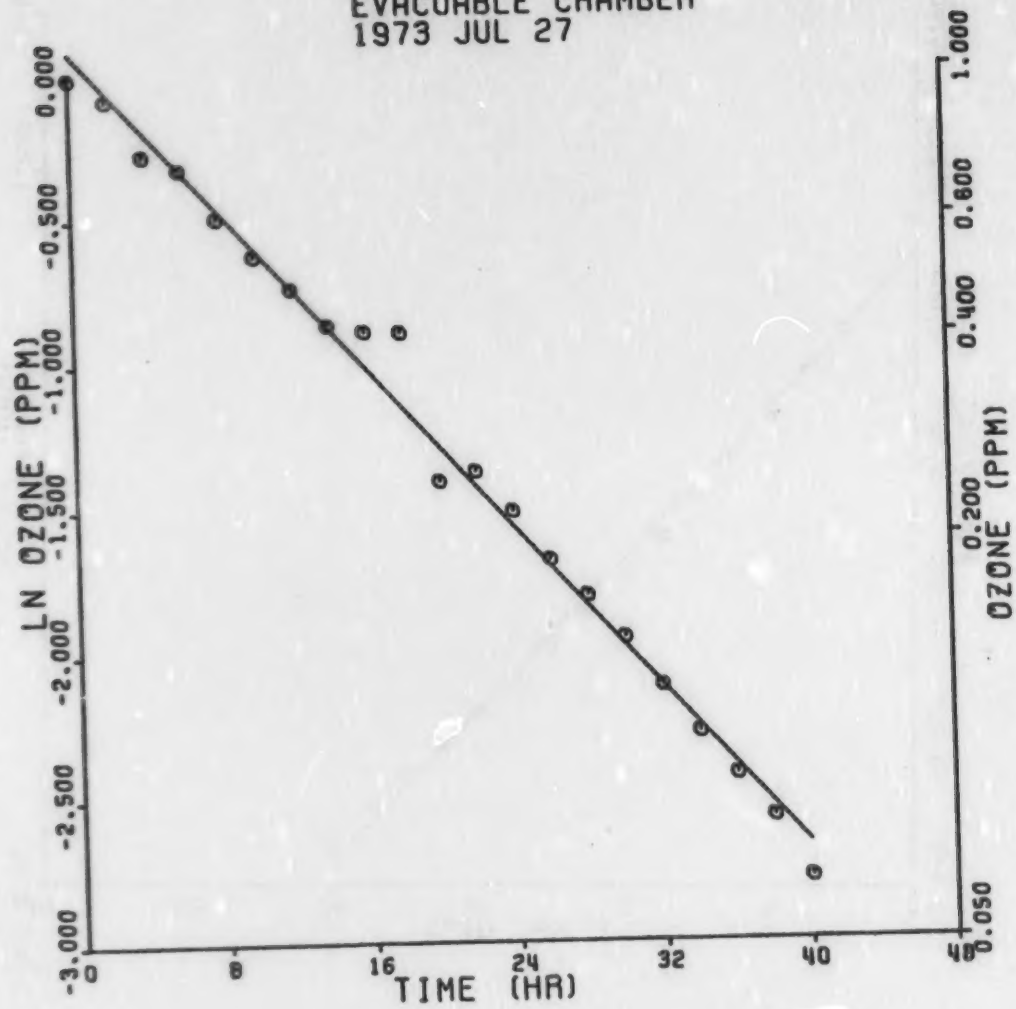




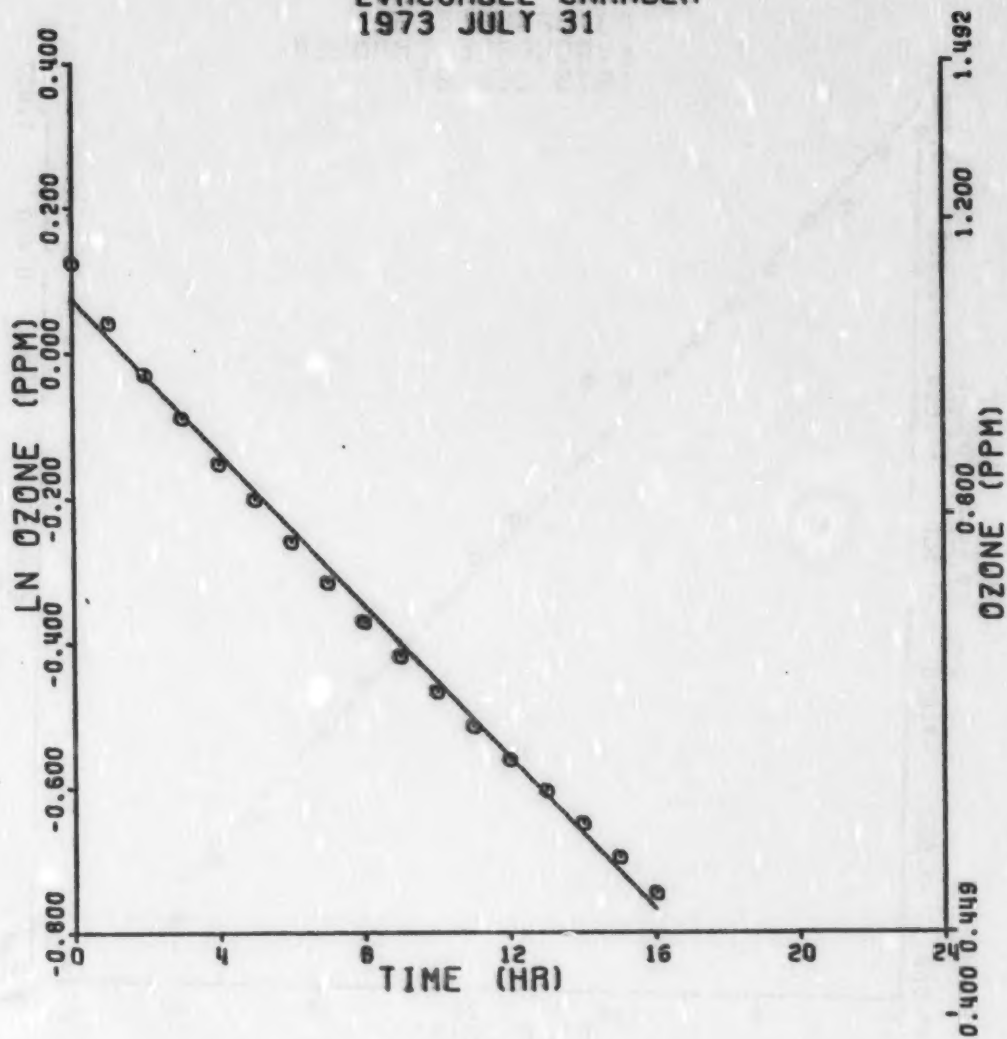
APPENDIX B

Plots of Ozone Decay

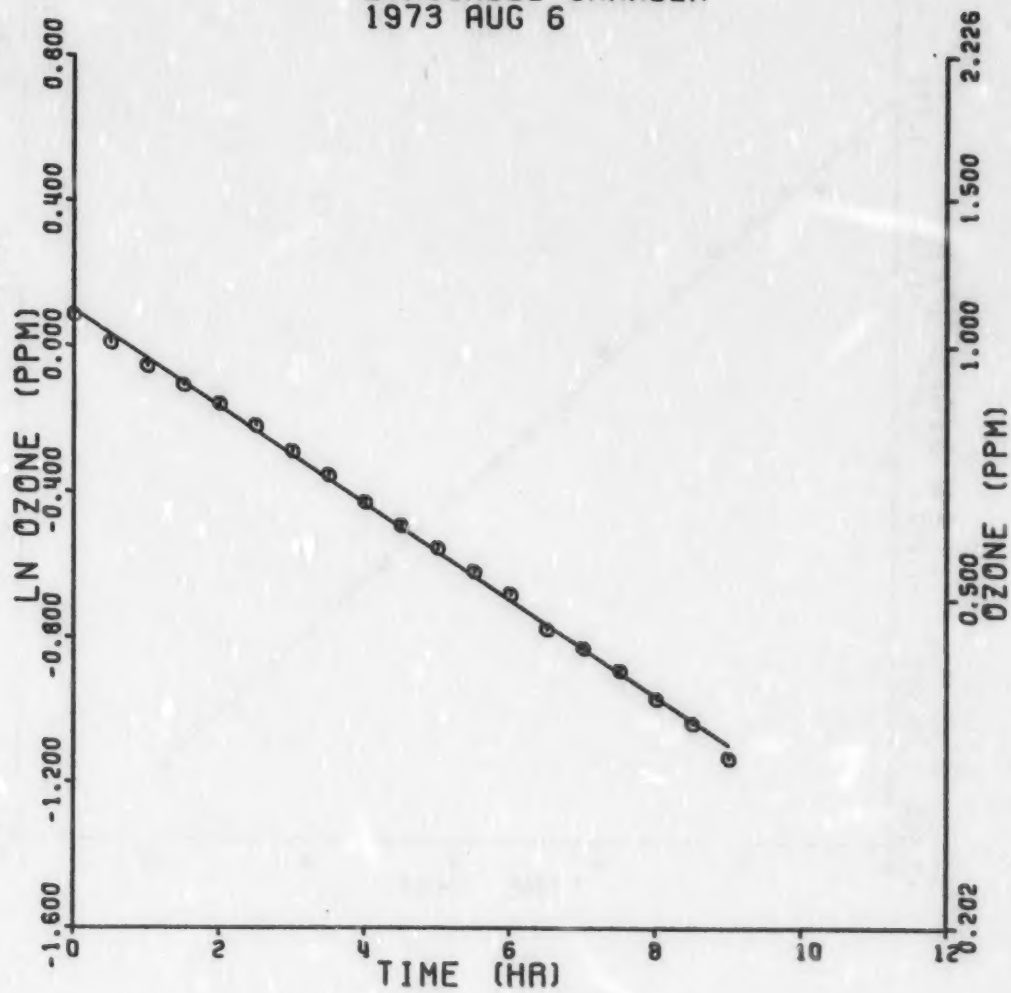
03 DARK DECAY
EVACUABLE CHAMBER
1973 JUL 27



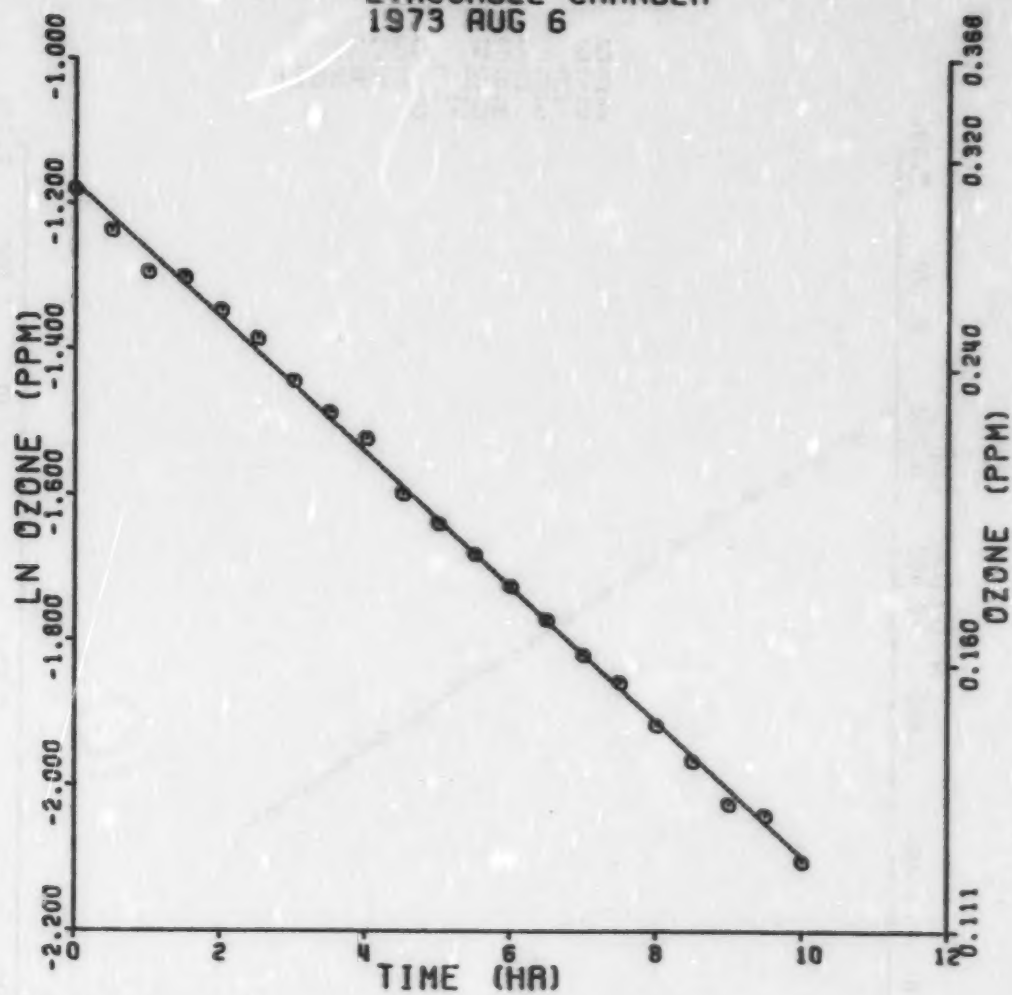
03 DARK DECAY
EVACUABLE CHAMBER
1973 JULY 31



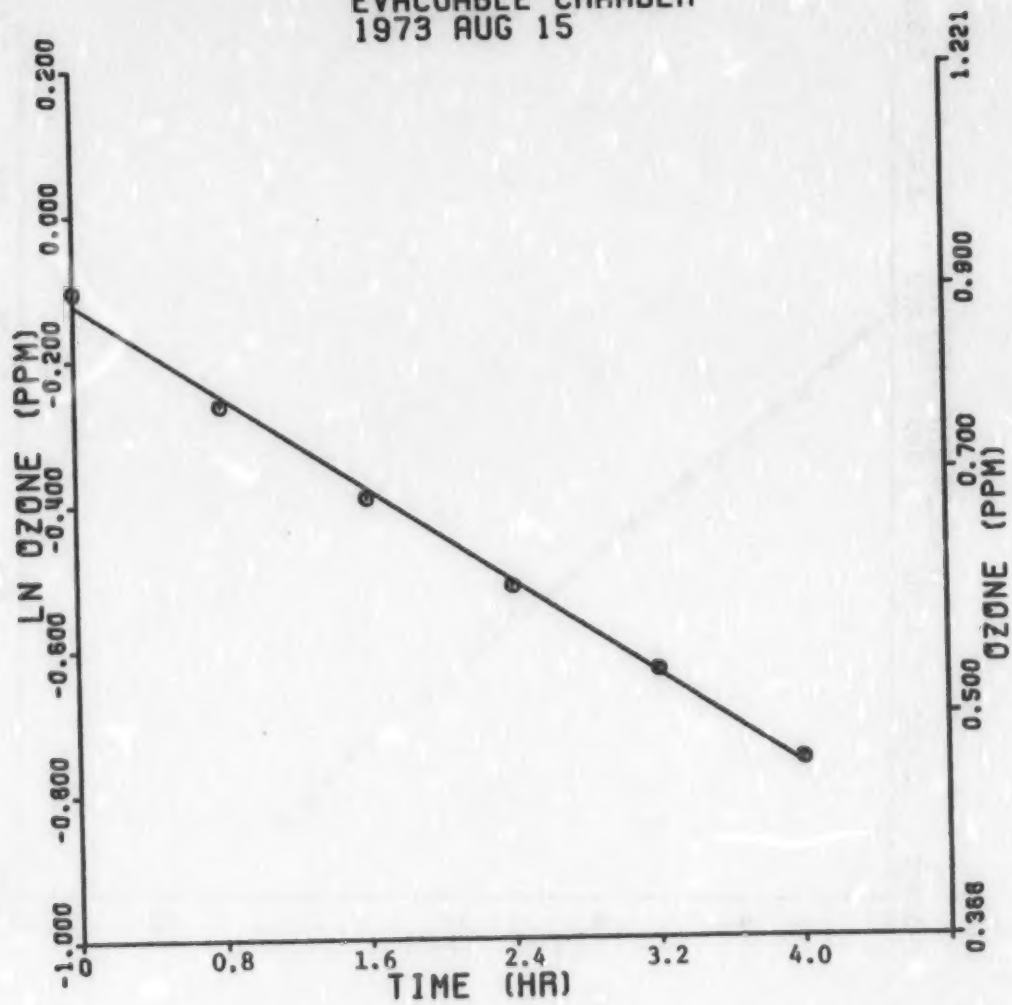
03 LIGHT DECAY
EVACUABLE CHAMBER
1973 AUG 6



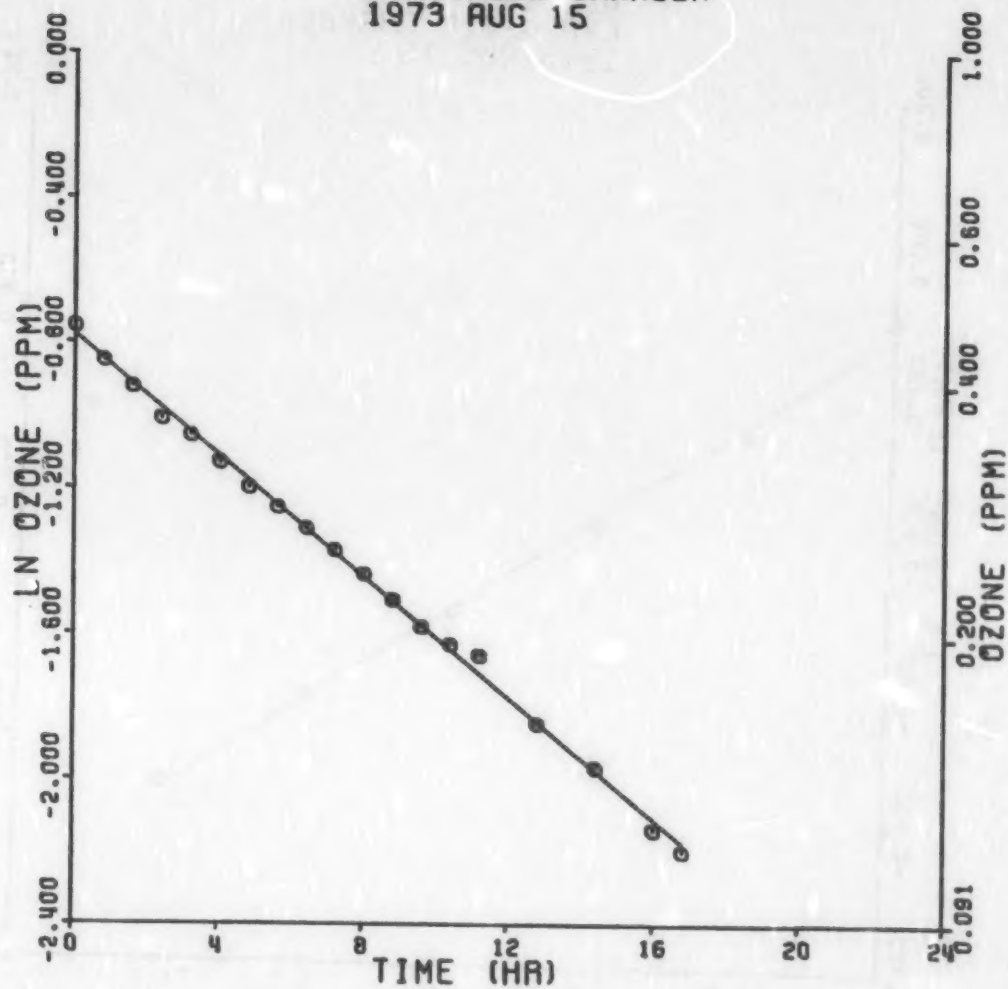
03 DARK DECAY
EVACUABLE CHAMBER
1973 AUG 6



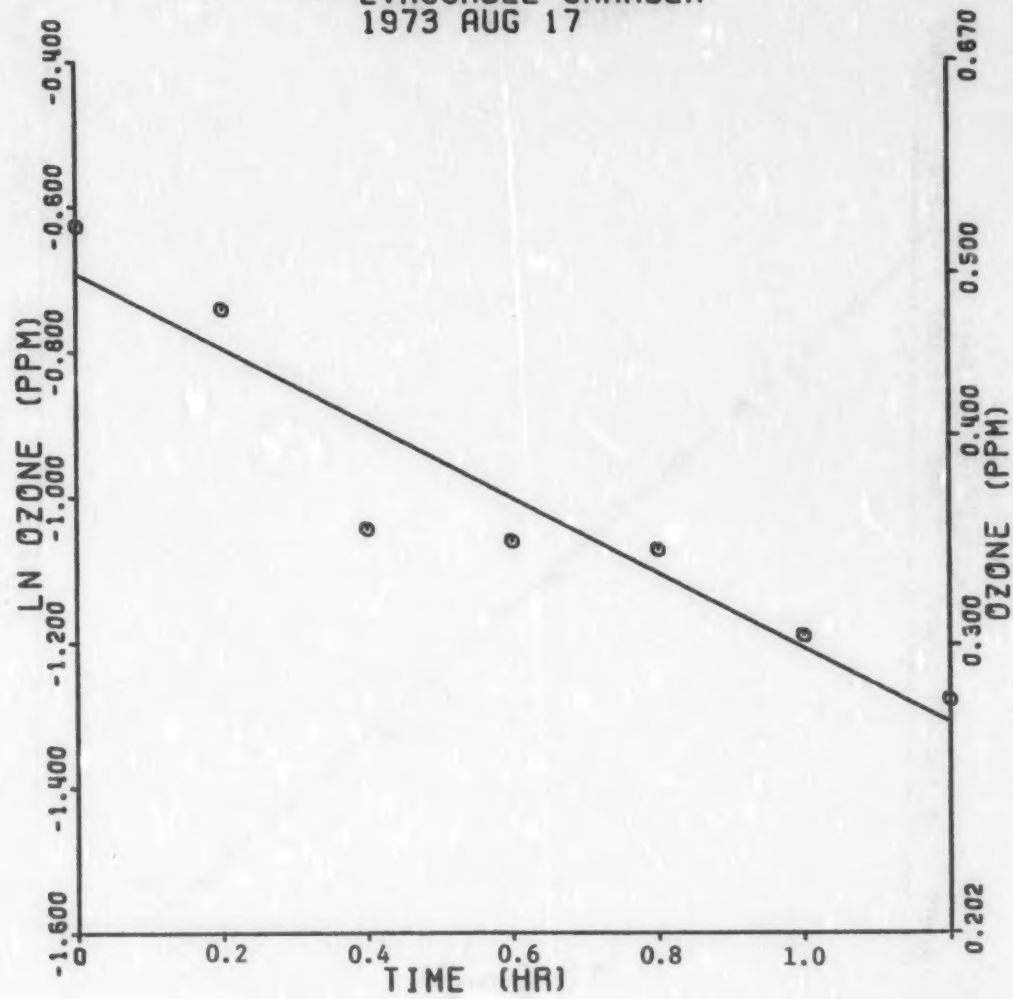
03 LIGHT DECAY
EVACUABLE CHAMBER
1973 AUG 15



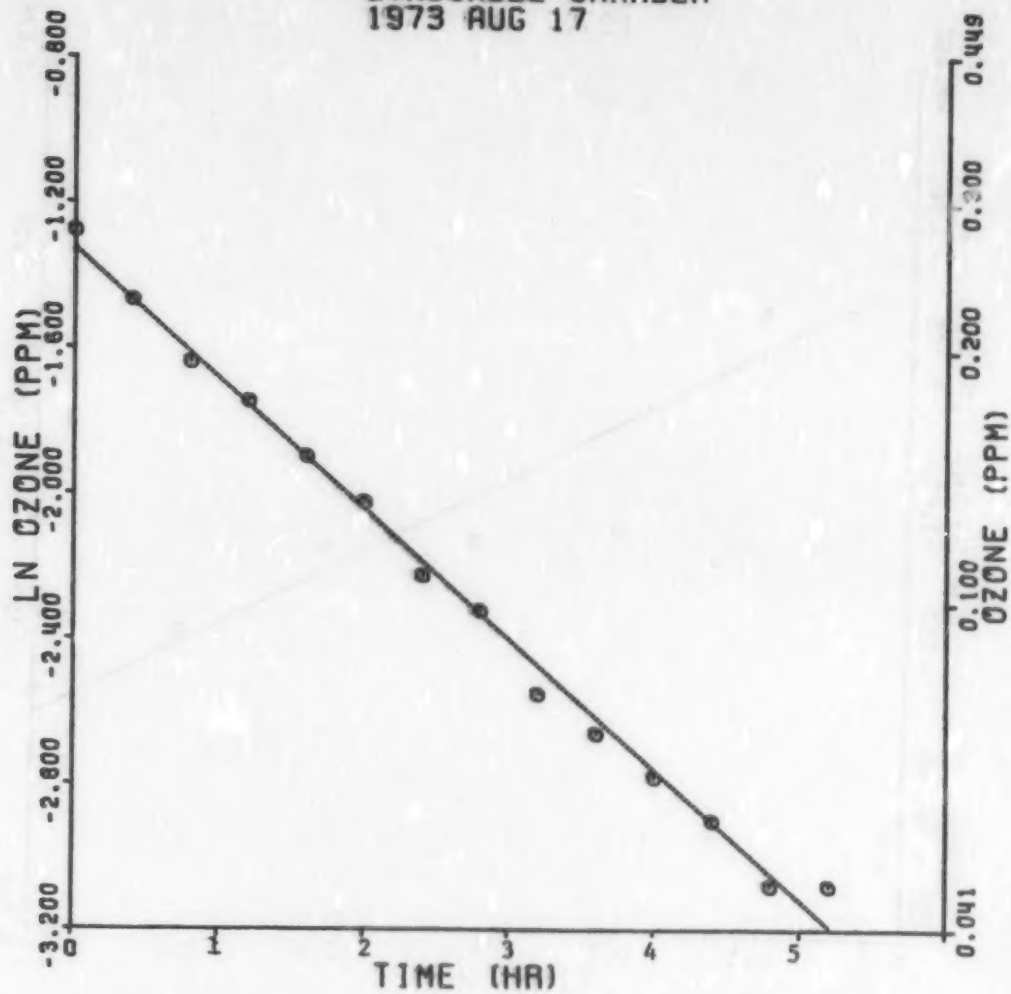
03 DARK DECAY
EVACUABLE CHAMBER
1973 AUG 15



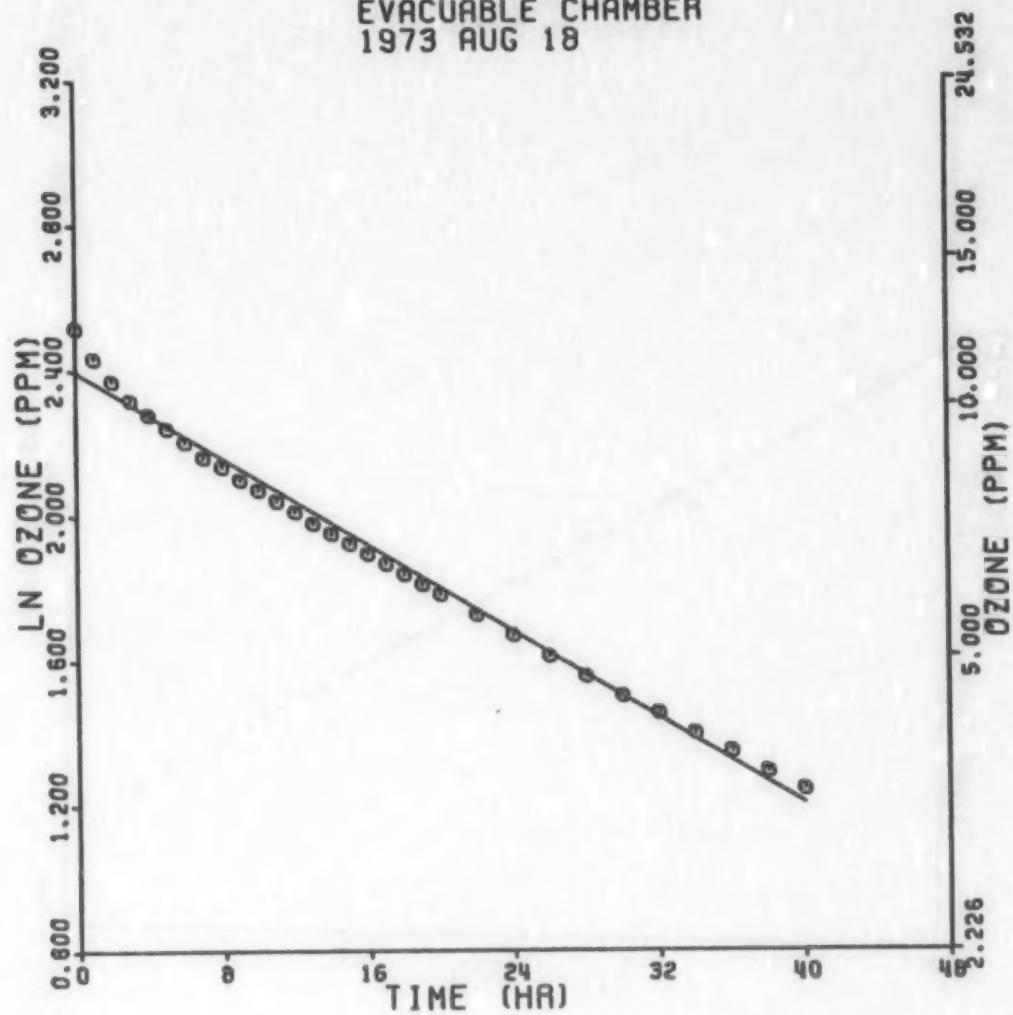
03 LIGHT DECAY
EVACUABLE CHAMBER
1973 AUG 17



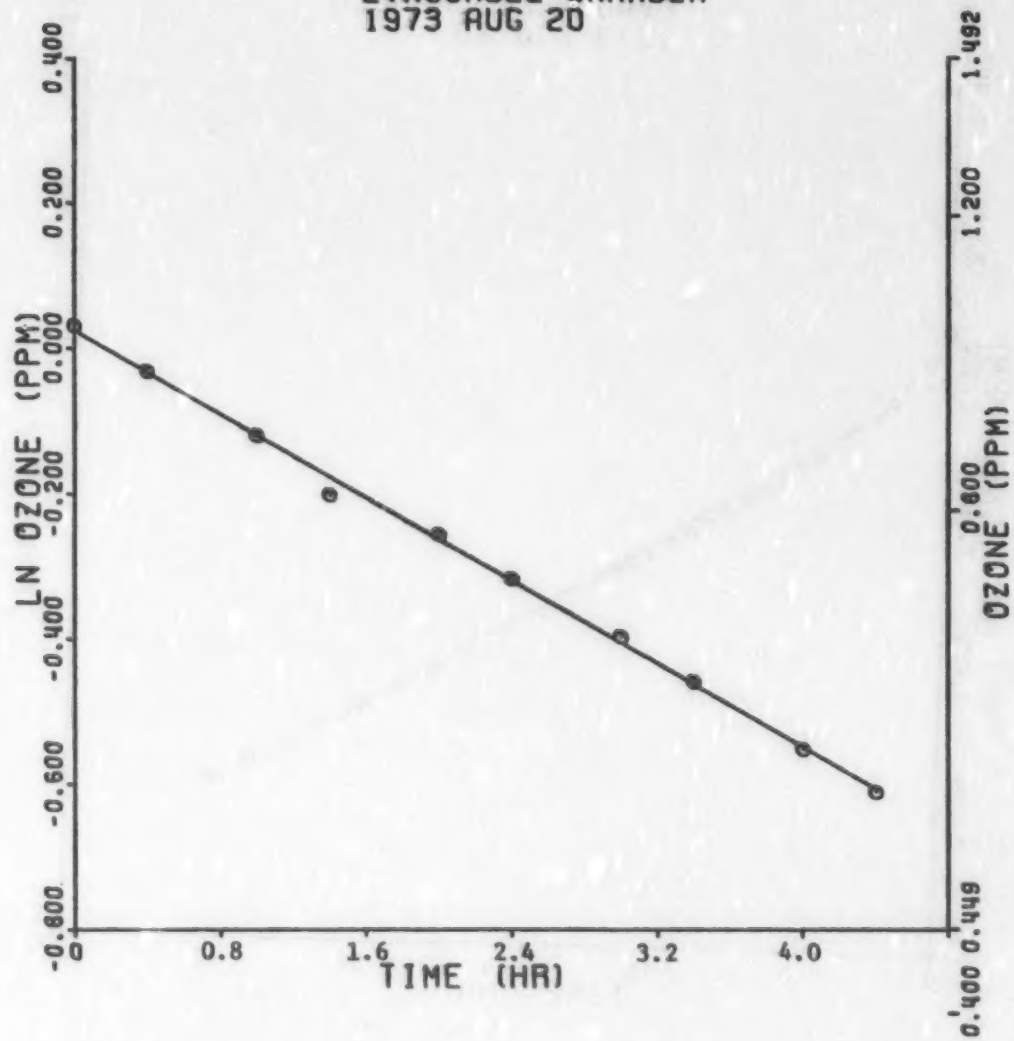
O3 DARK DECAY
EVACUABLE CHAMBER
1973 AUG 17



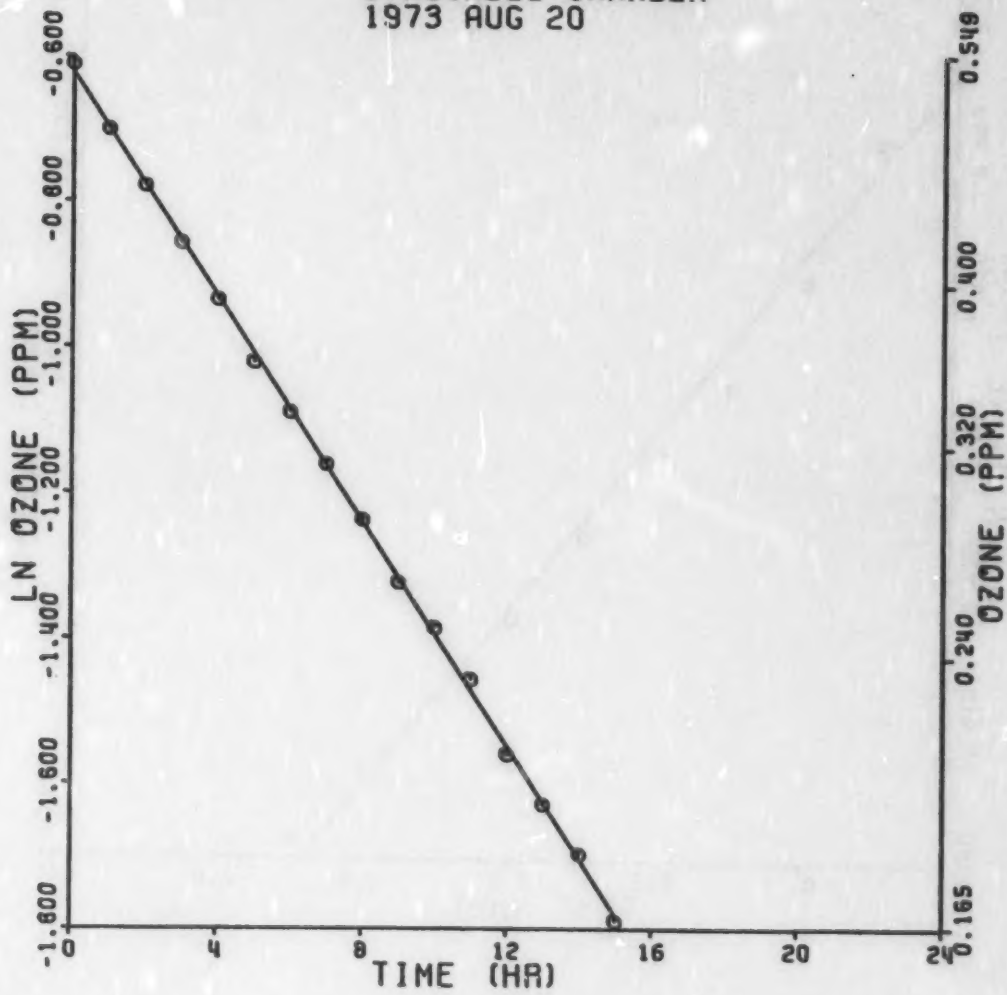
03 CONDITIONING
EVACUABLE CHAMBER
1973 AUG 18



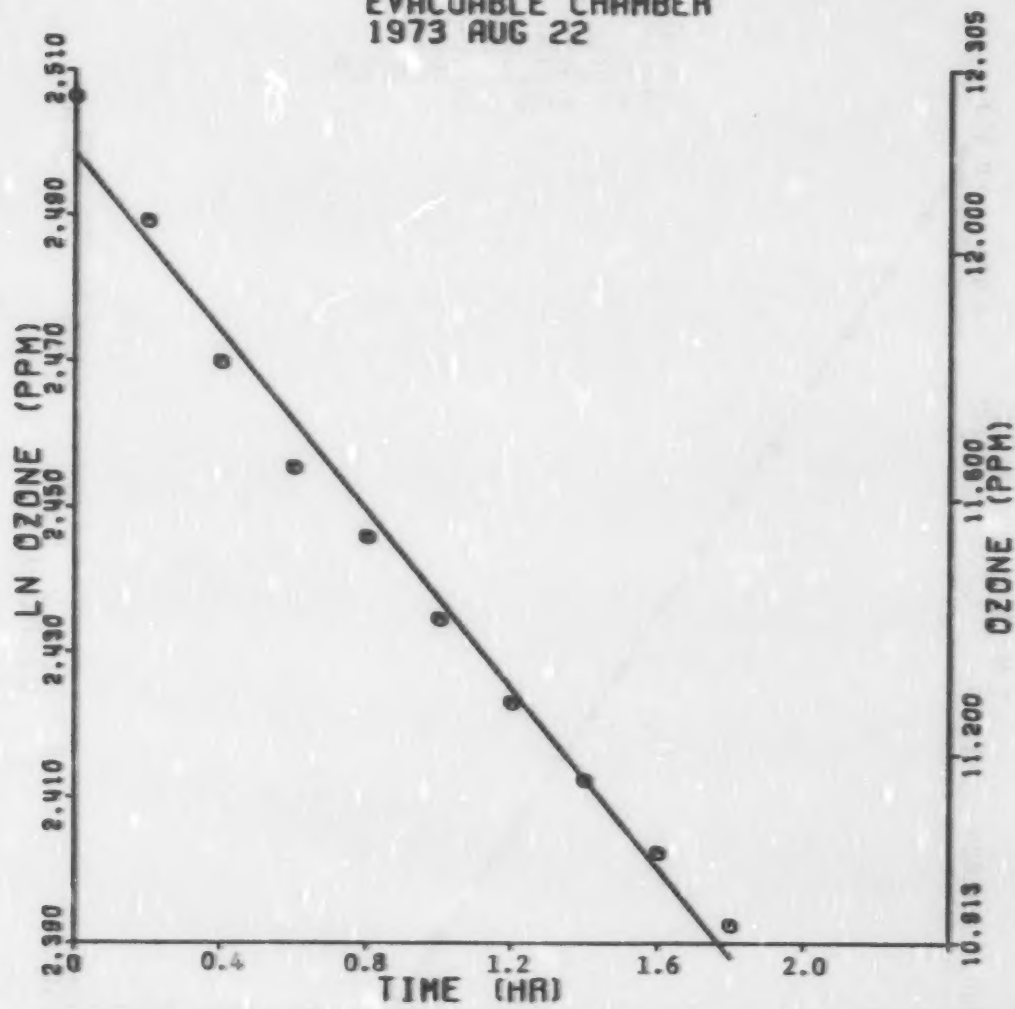
03 LIGHT DECAY
EVACUABLE CHAMBER
1973 AUG 20



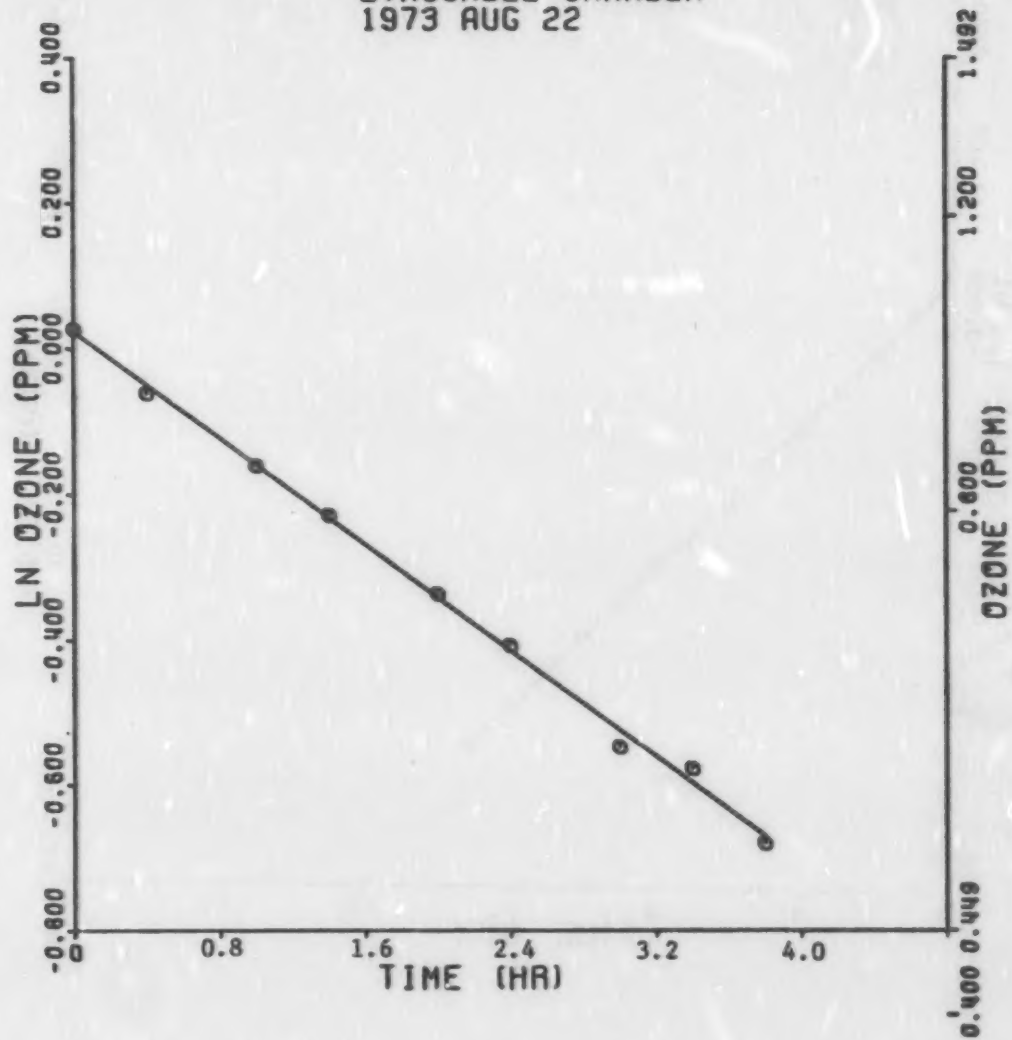
03 DARK DECAY
EVACUABLE CHAMBER
1973 AUG 20



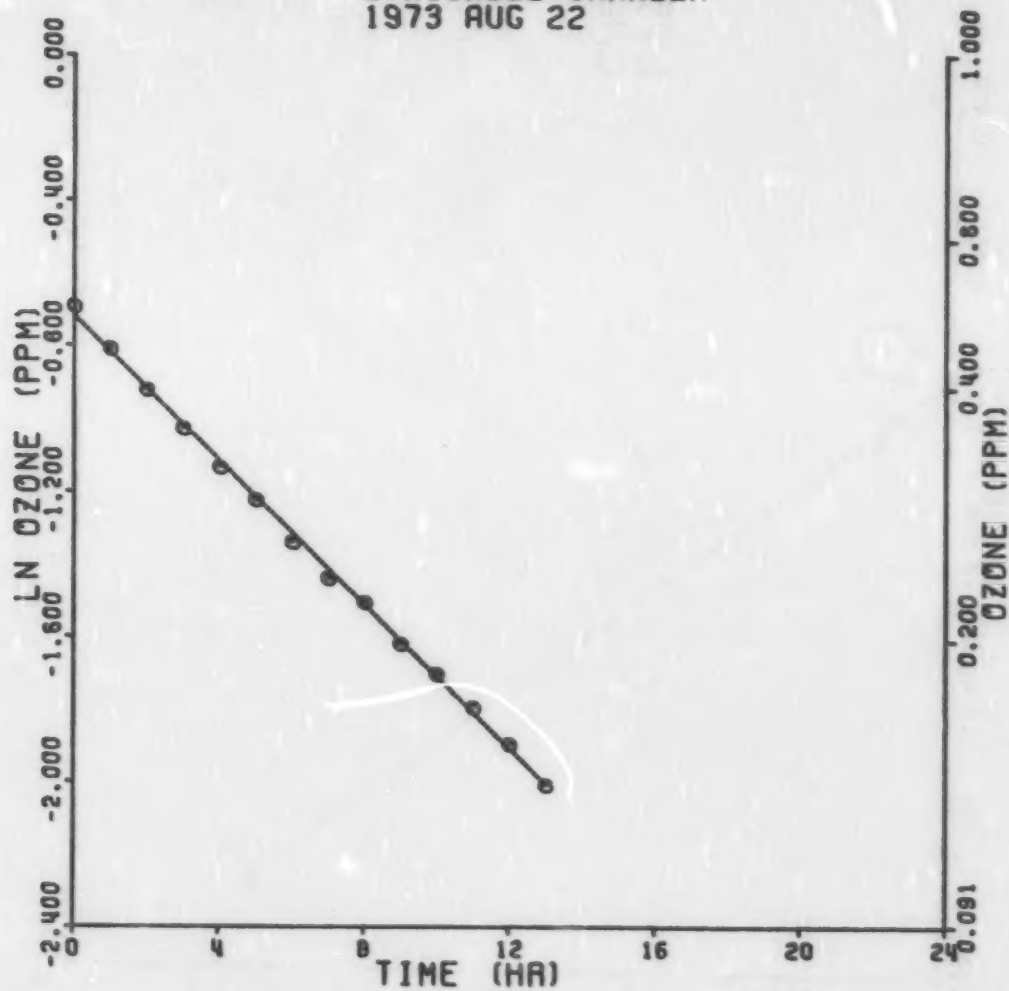
03 CONDITIONING
EVACUABLE CHAMBER
1973 AUG 22



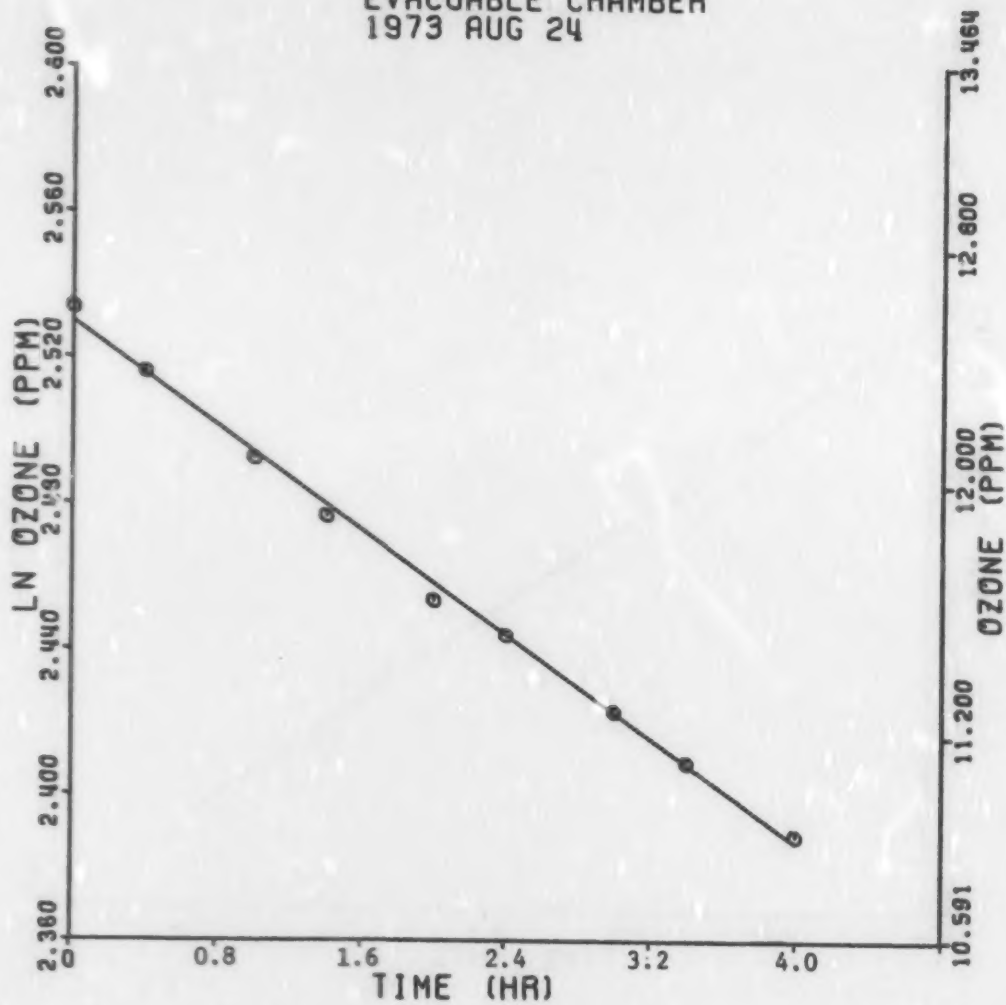
03 LIGHT DECAY, 2 HA COX
EVACUABLE CHAMBER
1973 AUG 22



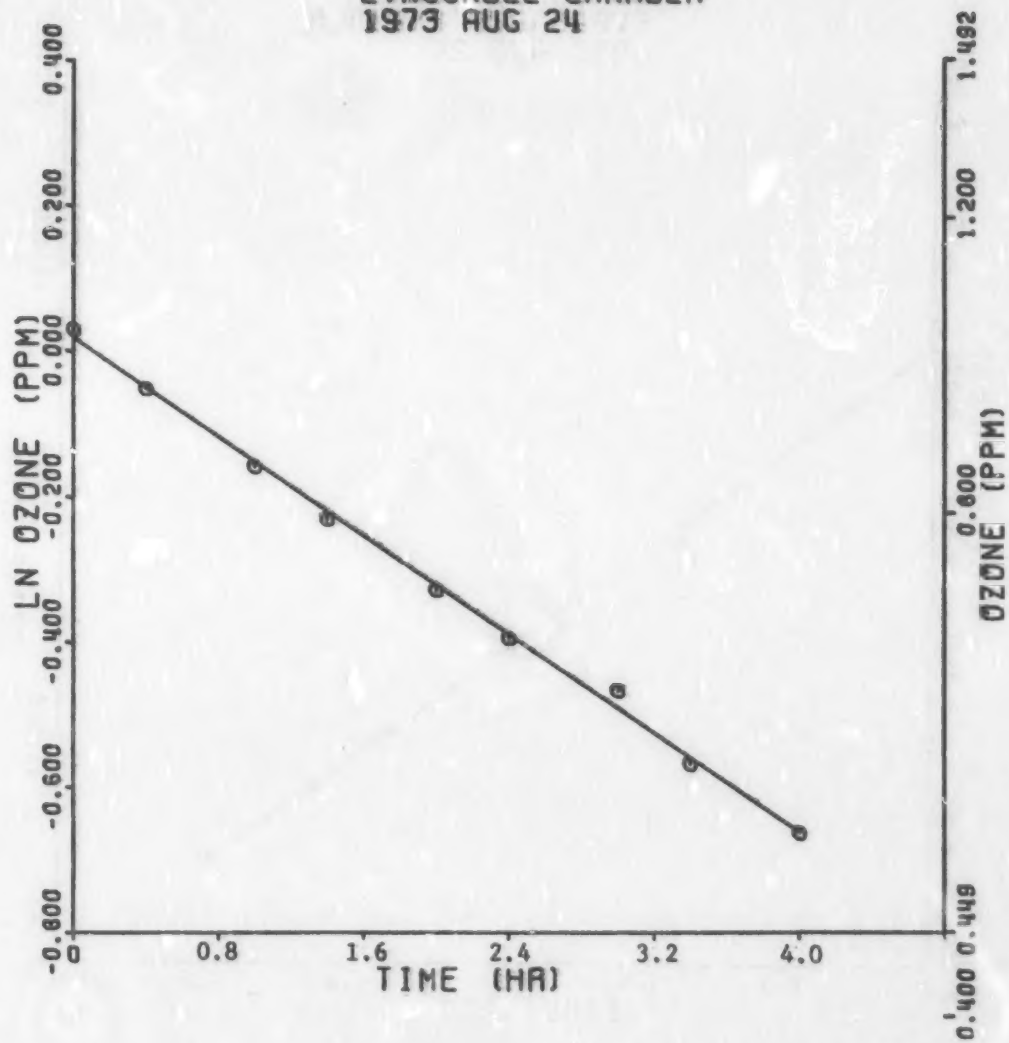
03 DARK DECAY, 2 HR COX
EVACUABLE CHAMBER
1973 AUG 22



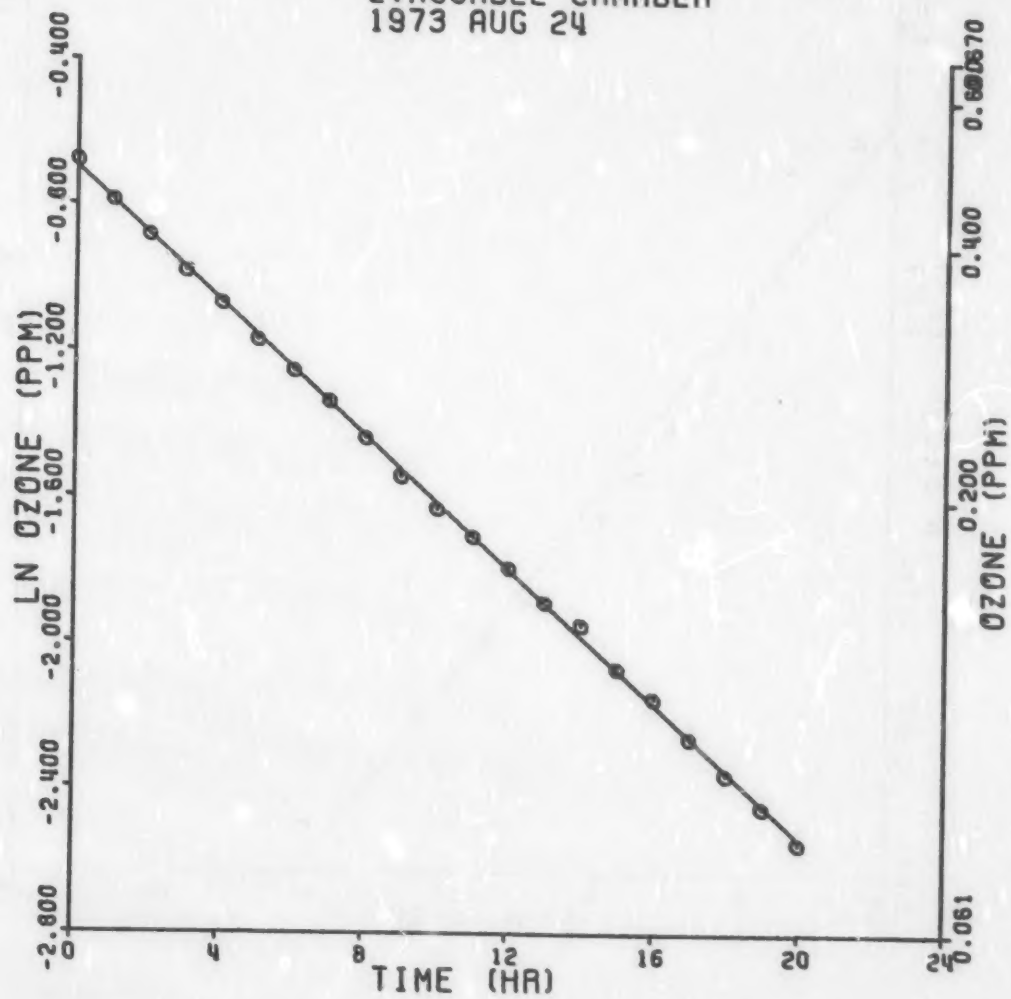
03 COX, 4 HR
EVACUABLE CHAMBER
1973 AUG 24



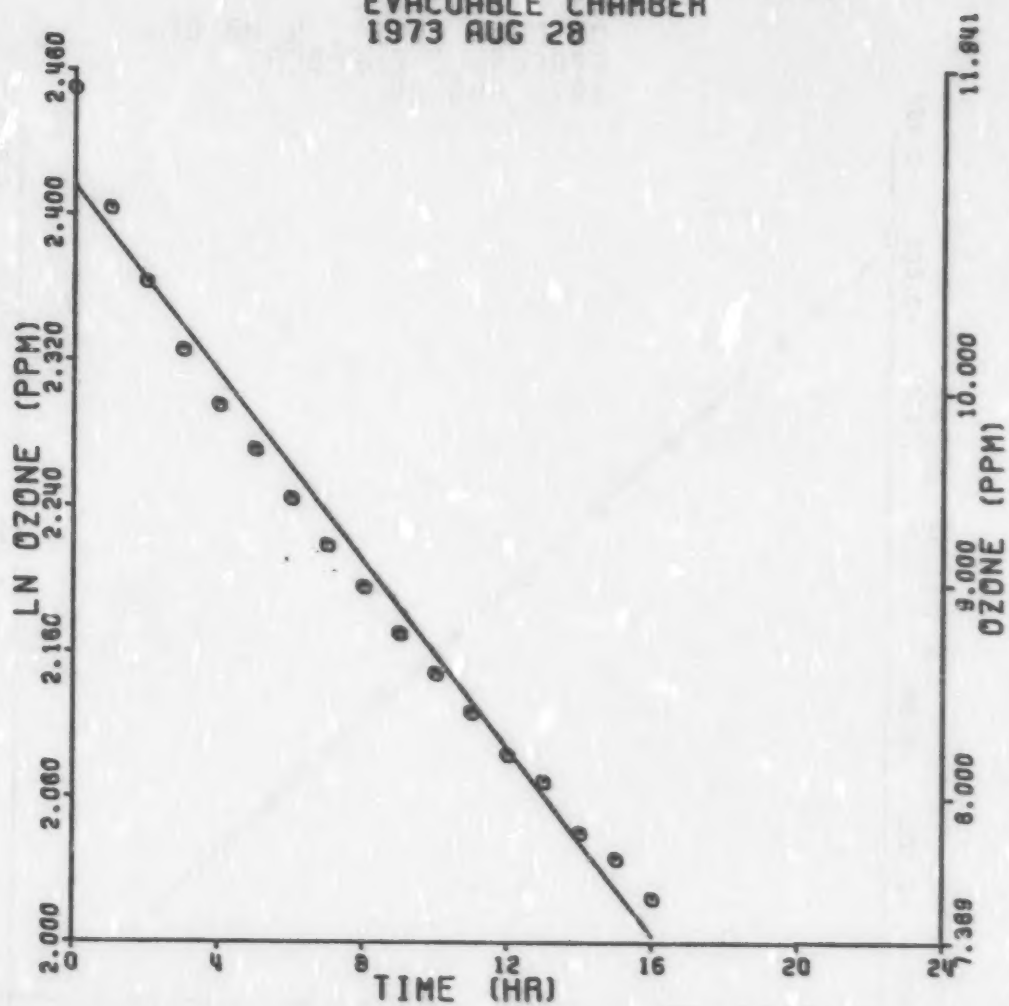
03 LIGHT DECAY, 4 HA COX
EVACUABLE CHAMBER
1973 AUG 24



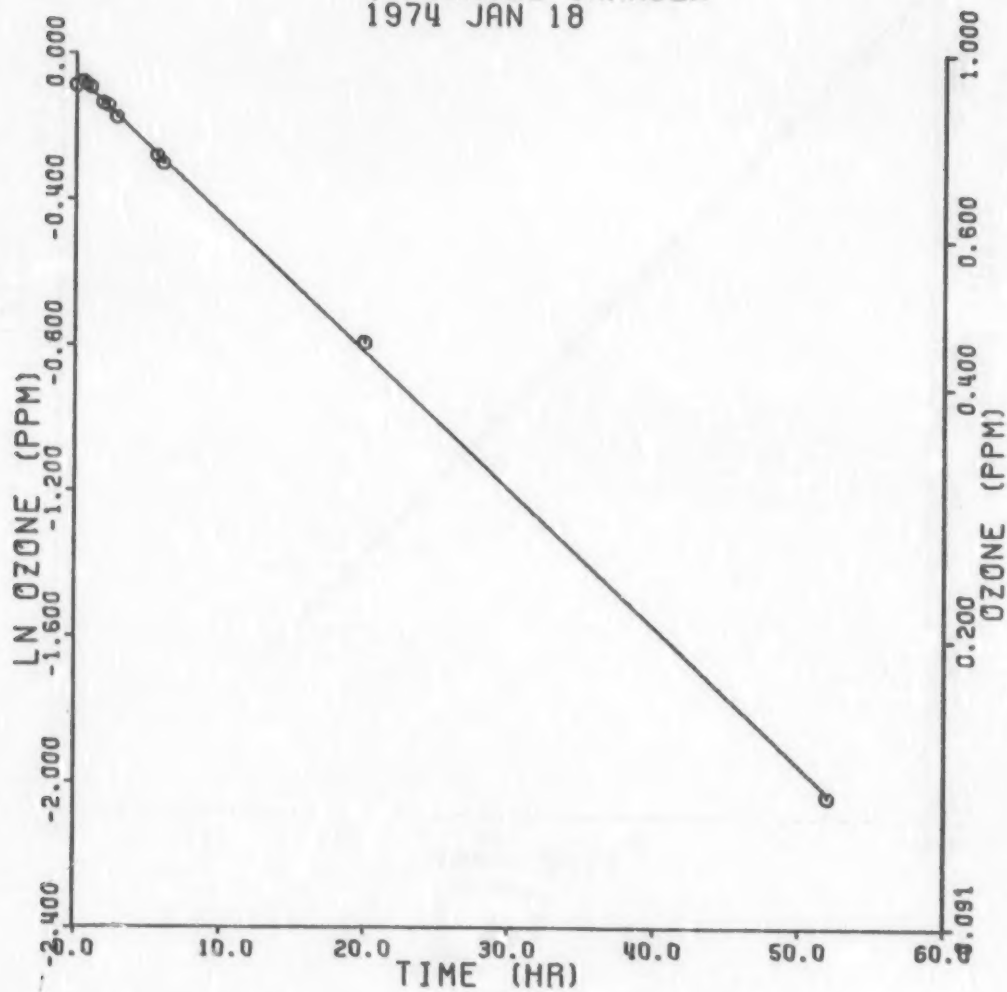
03 DARK DECAY, 4 HR COX
EVACUABLE CHAMBER
1973 AUG 24



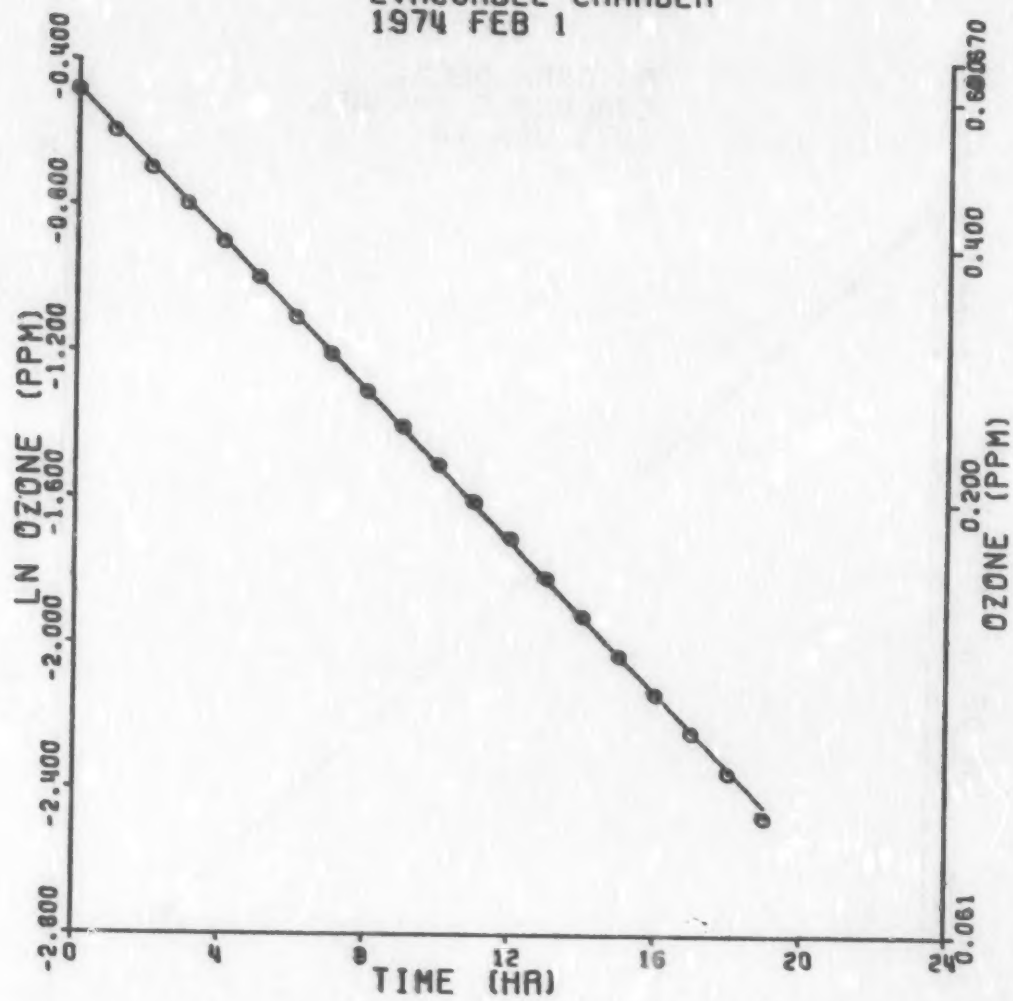
03 DARK DECAY FROM 12 PPM
EVACUABLE CHAMBER
1973 AUG 28



03 DARK DECAY
EVACUABLE CHAMBER
1974 JAN 18

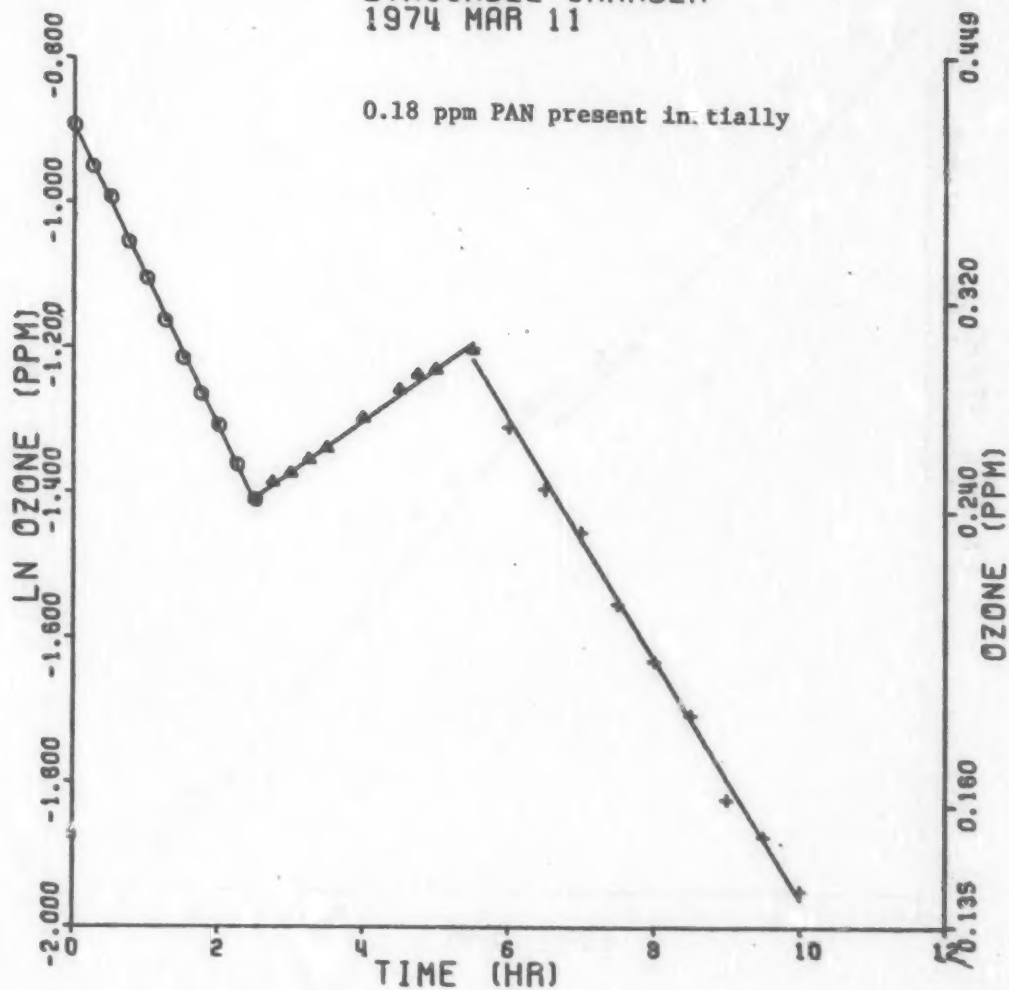


O3 DARK DECAY
EVACUABLE CHAMBER
1974 FEB 1

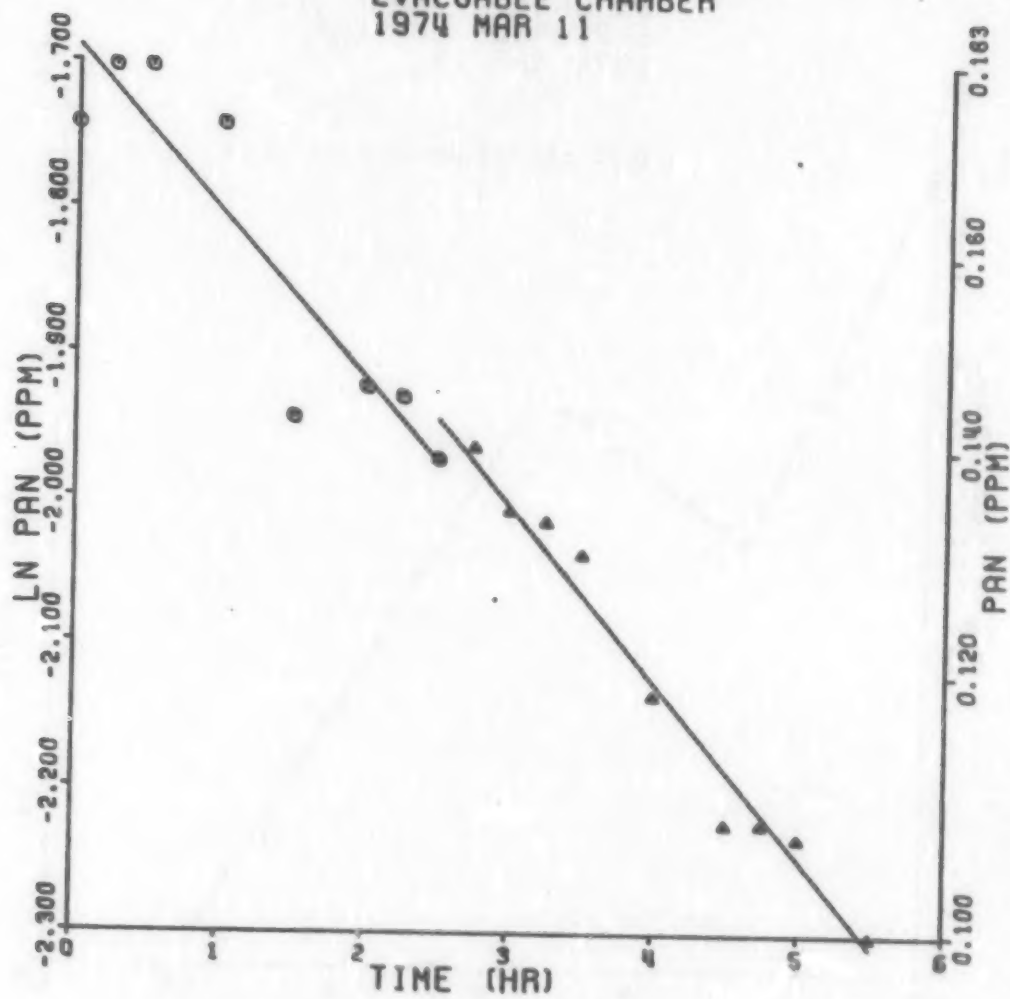


03 DARK, LT. DARK DECAY
EVACUABLE CHAMBER
1974 MAR 11

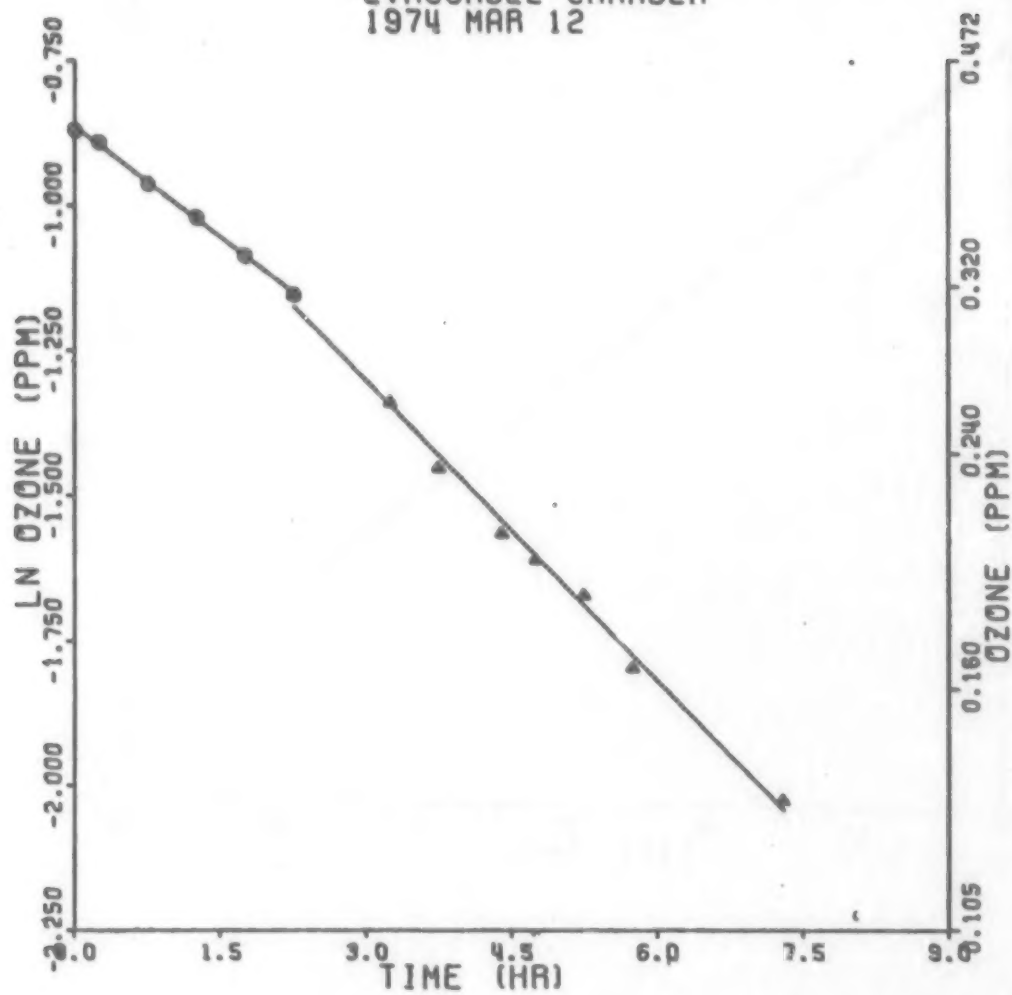
0.18 ppm PAN present initially



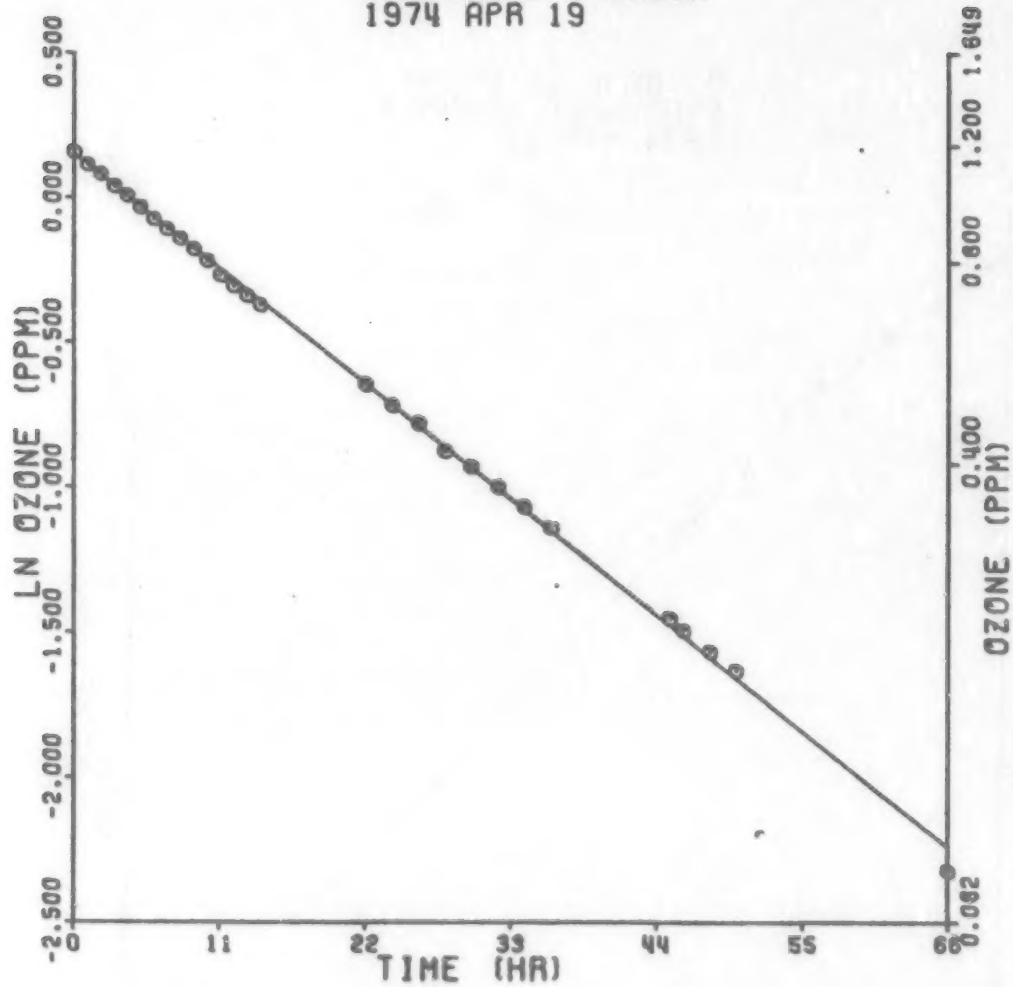
PAN DARK, LIGHT DECAY
EVACUABLE CHAMBER
1974 MAR 11



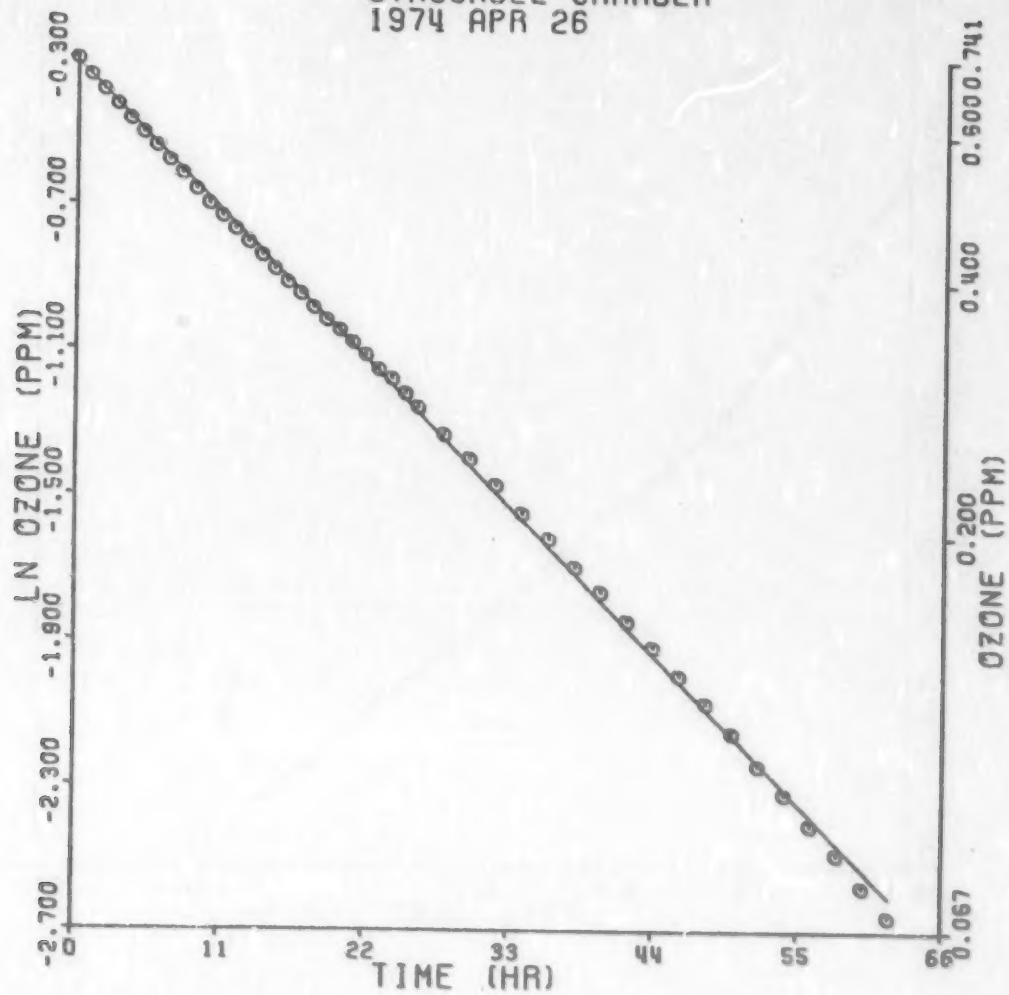
03 DARK, LT DECAY
EVACUABLE CHAMBER
1974 MAR 12



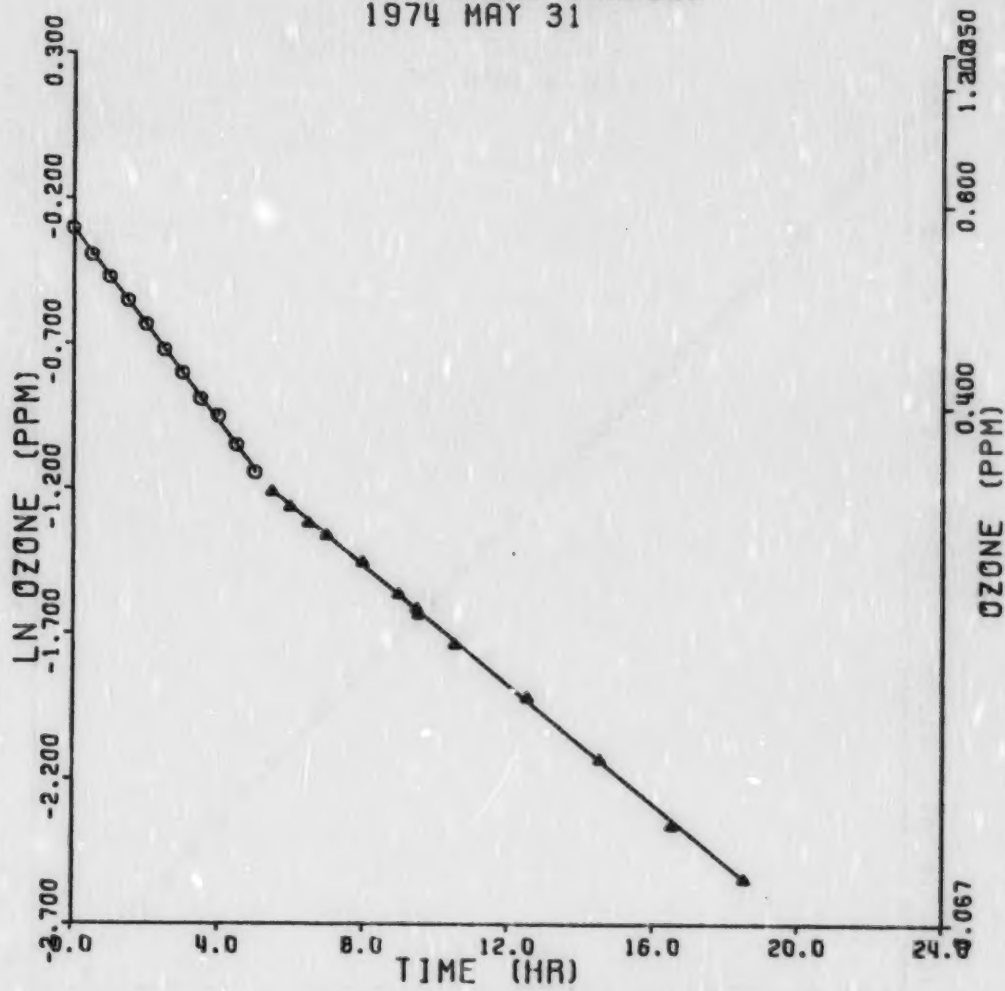
03 DARK DECAY
EVACUABLE CHAMBER
1974 APR 19



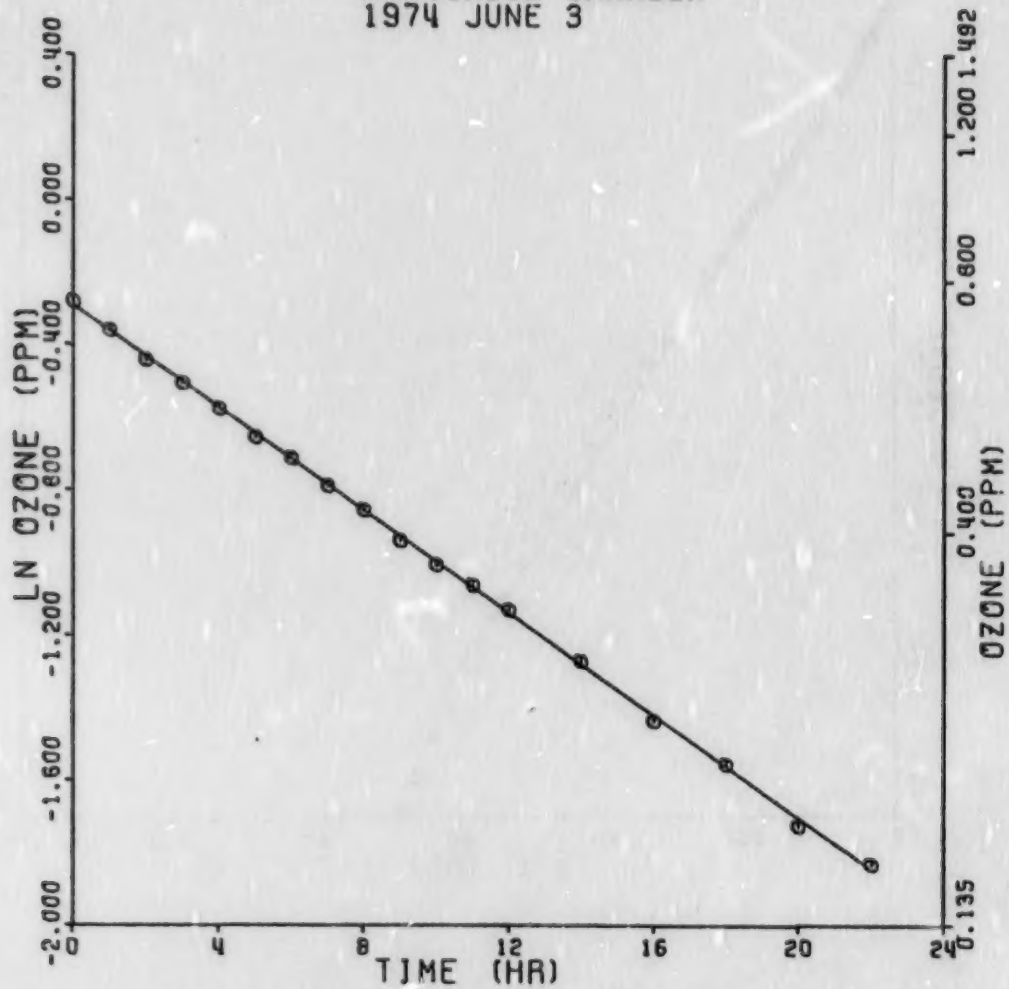
OZONE DARK DECAY
EVACUABLE CHAMBER
1974 APR 26



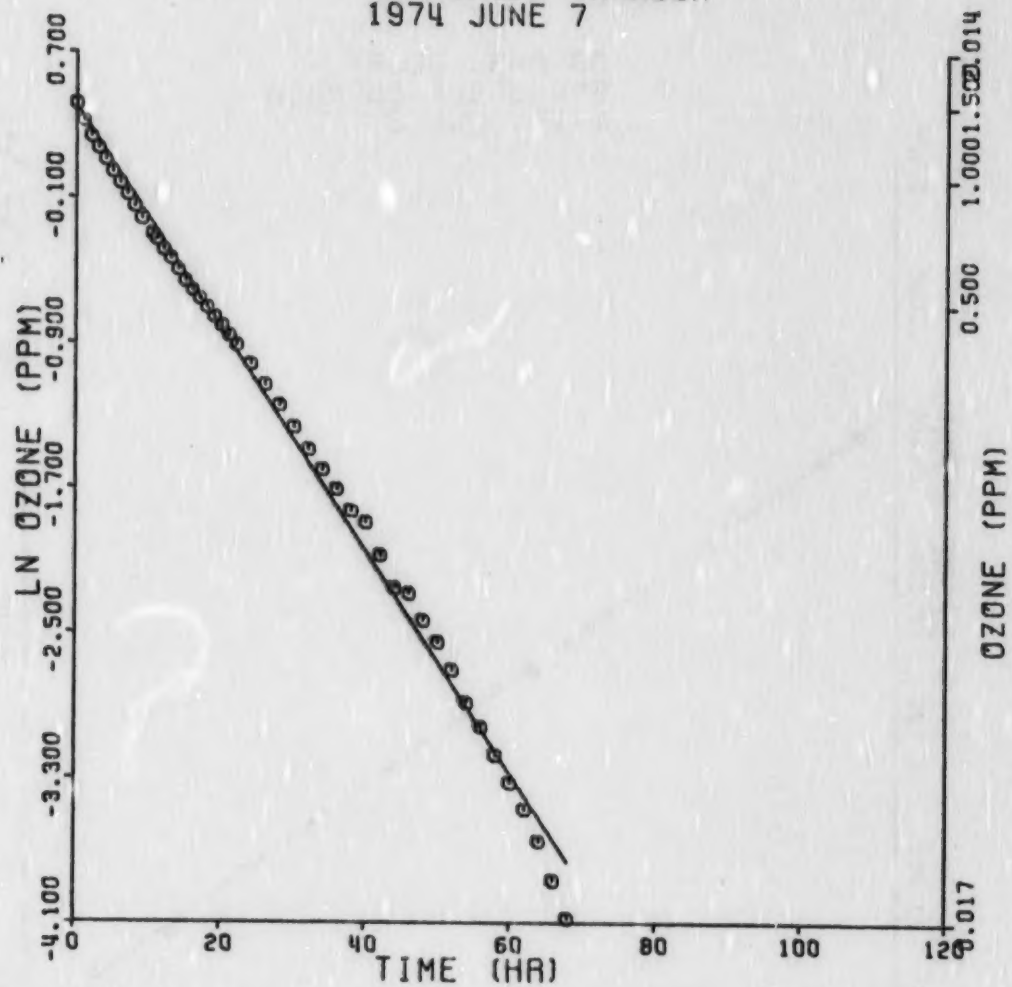
03 LIGHT, DARK DECAY
EVACUABLE CHAMBER
1974 MAY 31



O3 DARK DECAY
EVACUABLE CHAMBER
1974 JUNE 3



OZONE DECAY
EVACUABLE CHAMBER
1974 JUNE 7



APPENDIX C

Detailed Data Sheets

EC-1 DARK
EVACUABLE CHAMBER
1974 JAN 21

25 GC SAMPLES TAKEN, RAST FACTOR 1.4, CO FACTOR 0.76/22

CLOCK TIME	ELAPSED TIME(MIN)	OZONE (PPM)	DETRANT (PPM)	NO (PPM)	NO2-PAN (PPM)	NOX-PAN (PPM)	PROPENE (PPM)	N-C4 (PPM)	HCHO (PPM)	HCHO VOL (L)	O3-HO /HO2	TOT M (PPM)	TOT C (PPM)
1200	0-	0-0	0-005	0-575	0-055	0-626	0-465	0-556	-----	20-00	0-0	0-630	-----
1230	30-	0-0	0-005	0-575	0-068	0-636	0-475	0-586	-----	-----	0-0	0-643	-----
1300	60-	0-0	0-005	0-560	0-071	0-625	0-465	0-566	-----	20-00	0-0	0-631	-----
1330	90-	0-0	0-005	0-553	0-072	0-623	0-465	0-566	-----	-----	0-0	0-625	-----
1400	120-	0-0	0-0	0-552	0-072	0-622	0-462	0-553	-----	20-00	0-0	0-624	-----
1430	150-	0-0	0-0	0-546	0-072	0-611	0-458	0-549	-----	-----	0-0	0-618	-----
1500	180-	0-001	0-0	0-534	0-072	0-606	0-453	0-545	-----	20-00	0-006	0-606	-----
1530	210-	0-0	0-0	0-528	0-072	0-600	0-453	0-542	-----	-----	0-0	0-600	-----
1600	240-	0-3	0-0	0-527	0-072	0-598	0-441	0-538	-----	-----	0-0	0-599	-----
1630	270-	0-0	0-0	0-517	0-073	0-599	0-431	0-528	-----	-----	0-0	0-590	-----
1700	300-	0-001	0-0	0-506	0-072	0-588	0-450	0-524	-----	-----	0-006	0-578	-----

----- NO DATA TAKEN ----- DATA DISCARDED 7 QUESTIONABLE DATA

EC-1 DARK
EVACUABLE CHAMBER
1974 JAN 21
AVE WALL TEMP(1) = 85.0
AVE RH = 31.5

CLOCK TIME	ELAPSED TIME T1-T0(MIN)	T1 (DEG F)	REL HUM (%)	CO (PPM)	ACETALD (PPM)	PROPALD (PPM)	ACETONE (PPM)	MEK (PPM)
1200	0.	85.0	31.5	3.31	0.004	0.0	0.011	0.000
1230	30.	85.0	33.0	3.31	0.004	0.0	0.011	0.000
1300	60.	85.0	33.0	3.29	0.005	0.0	0.013	0.000
1330	90.	85.0	32.0	3.21	0.004	0.0	0.012	0.000
1400	120.	85.0	32.0	3.17	0.004	0.0010	0.012	0.000
1430	150.	85.0	31.5	3.14	0.004	0.0010	0.012	0.000
1500	180.	85.0	31.0	3.07	0.005	0.0010	0.1027	0.000
1530	210.	85.0	30.5	3.00	0.004	0.0010	0.022	0.000
1600	240.	85.0	30.5	3.00	0.004	0.0010	0.022	0.000
1630	270.	85.0	30.0	2.93	0.004	0.0010	0.026	0.000
1700	300.	85.0	30.0	2.93	0.006	0.0010	0.026	0.000

----- NO DATA TAKEN ----- DATA DISCARDED ----- 7 QUESTIONABLE DATA

EC-2 PROPENE-BUTANE
EVACUABLE CHAMBER
1974 JAN 22

SIMULATOR ON 1045, OFF 1646 0.25 INCH PYREX FILTER
NOTE NO RADIOMETER WATER FLOW AT 1615
55 GC SAMPLES TAKEN, MAST FACTOR 1.6, CO FACTOR 0.76/21, PAM CALIBR. 1

CLOCK TIME	ELAPSED TIME(MIN)	OZONE (PPM)	OXIDANT (PPM)	NO (PPM)	NO2-PAN (PPM)	NOX-PAN (PPM)	PROPENE (PPM)	H-C4 (PPM)	PAM (PPM)	HCHO (PPM)	HCHO VOL (L)	O3/NO2 /NO2	TOT N (PPM)	TOT C (PPM)
1045	0.	0.0	C.0	0.600	0.086	0.484	0.4767	0.4767	0.0	0.0	20.00	0.0	0.686	3.349
1100	18.	0.0	0.005	0.546	0.143	0.483	0.476	0.504	0.000	0.000	0.000	0.0	0.690	0.000
1115	30.	0.0	0.015	0.456	0.213	0.470	0.439	0.484	0.000	0.000	0.000	0.0	0.671	0.000
1130	45.	0.002	0.025	0.356	0.291	0.667	0.396	0.476	0.000	0.000	0.000	0.003	0.650	0.000
1145	60.	0.007	0.040	0.252	0.380	0.622	0.357	0.484	0.000	0.118	30.00	0.005	0.636	0.000
1200	75.	0.030	0.075	0.168	0.428	0.594	0.311	0.454	0.006	0.000	0.000	0.012	0.601	0.000
1215	90.	0.062	0.100	0.122	0.439	0.564	0.275	0.450	0.011	0.000	0.000	0.017	0.572	0.000
1230	105.	0.098	0.135	0.102	0.425	0.527	0.247	0.445	0.000	0.000	0.000	0.024	0.546	0.000
1245	120.	0.139	0.175	0.096	0.398	0.487	0.210	0.435	0.028	0.212	30.00	0.034	0.522	3.200
1300	135.	0.179	0.205	0.095	0.366	0.442	0.183	0.435	0.000	0.000	0.000	0.046	0.503	0.000
1315	150.	0.211	0.235	0.094	0.326	0.411	0.146	0.435	0.055	0.000	0.000	0.061	0.475	0.000
1330	165.	0.250	0.270	0.083	0.288	0.371	0.110	0.435	0.000	0.000	0.000	0.072	0.442	0.000
1345	180.	0.281	0.295	0.083	0.250	0.332	0.110	0.435	0.086	0.000	31.00	0.093	0.419	0.000
1400	195.	0.307	0.325	0.082	0.210	0.289	0.082	0.435	0.000	0.000	0.000	0.119	0.394	0.000
1415	210.	0.333	0.335	0.079	0.173	0.254	0.064	0.405	0.118	0.000	0.000	0.152	0.371	0.000
1430	225.	0.354	0.345	0.079	0.145	0.222	0.055	0.405	0.000	0.000	0.000	0.193	0.355	0.000
1445	240.	0.372	0.370	0.080	0.114	0.194	0.046	0.395	0.144	0.250	30.00	0.262	0.338	3.196
1500	255.	0.380	0.385	0.078	0.100	0.178	0.035	0.385	0.000	0.000	0.000	0.296	0.324	0.000
1515	270.	0.389	0.390	0.077	0.090	0.166	0.027	0.385	0.000	0.000	0.000	0.332	0.314	0.000
1530	285.	0.396	0.395	0.076	0.076	0.153	0.023	0.380	0.000	0.000	0.000	0.393	0.301	0.000
1545	300.	0.397	0.395	0.072	0.064	0.140	0.018	0.375	0.151	0.217	36.00	0.434	0.289	3.136
1600	315.	0.393	0.405	0.072	0.064	0.136	0.016	0.366	0.000	0.000	0.000	0.441	0.286	0.000
1615	330.	0.384	0.395	0.072	0.058	0.128	0.013	0.366	0.000	0.000	0.000	0.480	0.270	0.000
1630	345.	0.381	0.400	0.070	0.055	0.123	0.009	0.360	0.147	0.223	34.00	0.485	0.271	0.000
1645	360.	0.382	0.385	0.068	0.046	0.115	0.005	0.351	0.000	0.000	0.000	0.545	0.242	0.000

----- NO DATA TAKEN ----- DATA DISCARDED 7 QUESTIONABLE DATA

EC-2 PROPENE-BUTANE
EVACUABLE CHAMBER
1974 JAN 22

AVE WALL TEMP(1) = 84.8
AVE RADION = 1.82
AVE RH = 51.0
AVE SOLAR SIMULATOR POWER = 18.1

CLOCK TIME	ELAPSED TIME(MIN)	TIME(MIN)	REL HUM (%)	SSPOHER (KJ)	RADION (MV)	CO (PPH)	ACETALD (PPH)	PROPALD (PPH)	ACETONE (PPH)	MEK (PPH)
1045	0.	85.0	53.0	17.95	1.81	4.20	0.002	0.0010	0.004	0.001
1100	15.	85.0	53.0	17.70	1.81	4.20	0.002	0.0010	0.004	0.001
1115	30.	85.0	52.5	17.79	1.81	4.20	0.002	0.0010	0.004	0.001
1130	45.	85.0	52.5	18.09	1.87	4.20	0.002	0.0010	0.004	0.001
1145	60.	85.1	52.0	18.00	1.86	4.20	0.002	0.0010	0.004	0.001
1200	75.	85.3	51.5	18.12	1.86	4.01	0.002	0.0010	0.004	0.001
1215	90.	82.5	52.0	18.20	1.85	4.20	0.002	0.0010	0.004	0.001
1230	105.	84.0	54.5	18.20	1.85	4.24	0.002	0.0020	0.056	0.016
1245	120.	84.5	55.0	18.11	1.83	4.20	0.002	0.0020	0.056	0.016
1300	135.	84.5	54.5	18.15	1.82	4.20	0.002	0.0020	0.056	0.016
1315	150.	84.8	54.0	18.11	1.82	4.20	0.002	0.0020	0.056	0.016
1330	165.	84.9	53.0	18.11	1.81	4.28	0.002	0.0020	0.056	0.016
1345	180.	84.9	50.0	17.91	1.81	4.24	0.307	0.0030	0.102	0.026
1400	195.	84.9	50.0	17.79	1.80	4.32	0.002	0.0020	0.056	0.016
1415	210.	85.0	52.5	18.00	1.84	4.32	0.002	0.0020	0.056	0.016
1430	225.	84.9	52.0	18.24	1.84	4.24	0.002	0.0020	0.056	0.016
1445	240.	84.9	50.0	18.15	1.83	4.39	0.272	0.0040	0.096	0.024
1500	255.	85.0	50.5	18.00	1.84	4.32	0.002	0.0020	0.056	0.016
1515	270.	85.0	50.5	18.00	1.84	4.35	0.002	0.0020	0.056	0.016
1530	285.	85.0	50.0	18.00	1.78	4.32	0.002	0.0020	0.056	0.016
1545	300.	85.0	48.0	18.20	1.76	4.51	0.278	0.0030	0.125	0.030
1600	315.	85.0	49.0	18.00	1.76	4.51	0.002	0.0020	0.056	0.016
1615	330.	85.0	47.5	18.20	1.76	4.55	0.002	0.0020	0.056	0.016
1630	345.	85.0	46.0	18.20	1.87	4.51	0.002	0.0020	0.056	0.016
1645	360.	85.0	45.5	18.44	1.84	4.55	0.275	0.0030	0.140	0.038

7 QUESTIONABLE DATA

DATA DISCARDED

NO DATA TAKEN

EC-3 PROPENE
EVACUABLE CHAMBER
1974 JAN 23

SIMULATOR ON 1115, OFF 1717 0.25 INCH PYREX FILTER
OZONE DATA FOR 1115 - 1300 HOURS CORRECTED FOR SAMPLING ERROR
53 GC SAMPLES TAKEN, MAST FACTOR 1.6, CO FACTOR 0.76/19.5, PAN CALIBR. 1

CLOCK TIME	ELAPSED TIME(MIN)	OZONE (PPM)	OXIDANT (PPM)	NO (PPM)	NO2-PAN (PPM)	NOX-PAN (PPM)	PROPENE (PPM)	PAN (PPM)	HCHO (PPM)	HCHO VOL (L)	O3+NO /NO2	TOT N (PPM)	TOT C (PPM)
1115	0.	0.0	---	0.141	0.019	0.181	0.404	0.0	0.0	30.00	0.0	0.180	2.718
1130	15.	0.013	---	0.098	0.077	0.141	0.449	0.002	0.002	0.000	0.010	0.176	0.000
1145	30.	0.150	---	0.070	0.100	0.171	0.750	0.002	0.002	0.000	0.104	0.172	0.000
1200	45.	0.255	---	0.065	0.088	0.157	0.659	0.002	0.002	0.000	0.104	0.172	0.000
1215	60.	0.274	---	0.066	0.078	0.144	0.596	0.011	0.216	30.00	0.107	0.180	0.000
1230	75.	0.271	---	0.0727	0.049	0.131	0.513	0.002	0.002	0.000	0.225	0.192	2.640
1245	90.	0.282	---	0.054	0.040	0.118	0.448	0.024	0.002	0.000	0.284	0.158	0.000
1300	105.	0.229	---	0.054	0.053	0.108	0.403	0.002	0.002	0.000	0.240	0.140	0.000
1315	120.	0.208	---	0.053	0.048	0.101	0.341	0.031	0.335	30.00	0.234	0.134	0.000
1330	135.	0.194	0.220	0.049	0.044	0.094	0.324	0.002	0.002	0.000	0.229	0.132	2.397
1345	150.	0.182	0.195	0.048	0.041	0.089	0.300	0.034	0.002	0.000	0.220	0.128	0.000
1400	165.	0.174	0.185	0.046	0.040	0.088	0.288	0.002	0.002	0.000	0.213	0.124	0.000
1415	180.	0.166	0.180	0.046	0.040	0.085	0.253	0.033	0.349	30.00	0.196	0.120	0.000
1430	210.	0.152	0.165	0.043	0.037	0.082	0.218	0.033	0.002	0.000	0.190	0.119	2.421
1445	240.	0.144	0.155	0.043	0.036	0.079	0.192	0.031	0.2177	31.00	0.170	0.114	0.000
1455	270.	0.142	0.145	0.042	0.038	0.081	0.161	0.029	0.002	0.000	0.173	0.110	2.030
1515	300.	0.138	0.130	0.041	0.039	0.078	0.143	0.027	0.002	0.000	0.156	0.109	0.000
1645	330.	0.136	0.130	0.038	0.036	0.076	0.119	0.026	0.002	0.000	0.145	0.107	0.000
1700	345.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.359	28.00	0.144	0.101	0.000
1715	360.	0.135	0.140	0.037	0.037	0.074	0.101	0.023	0.002	0.000	0.137	0.097	1.700

----- NO DATA TAKEN ----- DATA DISCARDED 7 QUESTIONABLE DATA

EC-3 PROPENE
EVACUABLE CHAMBER
1974 JAN 23

AVE WALL TEMP(1) = 85.0
AVE RADION = 1.80
AVE RH = 42.5
AVE SOLAR SIMULATOR POWER = 18.2

CLOCK TIME	ELAPSED TIME	TIME(1)	REL HUM (%)	SS-POWER (KW)	RADION (MV)	CO (PPM)	ACETALD (PPM)	PROPALD (PPM)	ACETONE (PPM)
1115	0.	84.5	47.5	18.36	1.81	3.08	0.002	0.0	0.007
1130	15.	85.9	47.5	18.42	1.85	3.04	0.000	0.000	0.000
1145	30.	85.5	45.5	18.15	1.80	3.08	0.000	0.000	0.000
1200	45.	85.0	45.0	18.40	1.81	3.08	0.000	0.000	0.000
1215	60.	85.0	44.0	18.11	1.78	3.08	0.000	0.000	0.000
1230	75.	85.0	44.5	18.00	1.80	3.16	0.000	0.000	0.000
1245	90.	84.7	44.0	17.84	1.76	3.12	0.000	0.000	0.000
1300	105.	85.1	43.5	18.19	1.80	3.16	0.000	0.000	0.000
1315	120.	85.0	43.0	18.15	1.80	3.20	0.000	0.000	0.000
1330	135.	85.0	42.5	18.00	1.78	3.24	0.000	0.000	0.000
1345	150.	85.0	43.0	17.97	1.76	3.20	0.000	0.000	0.000
1400	165.	85.0	41.5	17.95	1.77	3.28	0.000	0.000	0.000
1415	180.	85.0	41.5	17.93	1.82	3.35	0.000	0.000	0.000
1445	210.	85.0	40.5	18.50	1.86	3.31	0.000	0.000	0.000
1515	240.	85.0	40.0	18.29	1.82	3.39	0.000	0.000	0.000
1545	270.	85.0	38.5	18.45	1.82	3.43	0.000	0.000	0.000
1615	300.	85.0	38.0	18.50	1.83	3.51	0.000	0.000	0.000
1645	330.	85.0	37.5	18.20	1.77	3.59	0.000	0.000	0.000
1700	345.	85.0	37.0	18.20	1.78	3.59	0.000	0.000	0.000
1715	360.	85.0	37.0	18.20	1.78	3.59	0.000	0.000	0.000

----- NO DATA TAKEN ----- DATA DISCARDED ----- QUESTIONABLE DATA

EC-4 PROPENE
EVACUABLE CHAMBER
1974 JAN 24

SIMULATOR ON 1030, OFF 1700 0.25 INCH PYREX FILTER
59 GC SAMPLES TAKEN, NAST FACTOR 1.6, CO FACTOR 0.76/20, PAN CALIBR. 1

CLOCK TIME	ELAPSED TIME(MIN)	OZONE (PPM)	OXIDANT (PPM)	NO (PPM)	NO2-PAN (PPM)	ACK-PAN (PPM)	PROPENE (PPM)	PAN (PPM)	MCHO (PPM)	MCHO VOL (L)	O3*NO /NO2	TOT N (PPM)	TOT C (PPM)
1030	0-	0-0	0-010	1-055	0-122	1-182	0-860	0-0	0-0	30.00	0-0	1-177	2-608
1045	15-	0-0	0-020	0-960	0-214	1-182	0-824	0-0	0-0	0-0	0-0	1-174	0-0
1100	30-	0-0	0-030	0-828	0-330	1-164	0-772	0-0	0-0	0-0	0-0	1-158	0-0
1115	45-	0-0	0-030	0-685	0-434	1-140	0-721	0-0	0-0	0-0	0-0	1-120	0-0
1130	60-	0-0	0-040	0-564	0-531	1-109	0-654	0-001	0-144	30.00	0-0	1-096	2-402
1145	75-	0-002	0-075	0-456	0-622	1-077	0-604	0-0	0-0	0-0	0-001	1-081	0-0
1200	90-	0-008	0-095	0-326	0-714	1-044	0-569	0-004	0-0	0-0	0-004	1-045	0-0
1215	105-	0-026	0-125	0-239	0-764	1-002	0-509	0-0	0-0	0-0	0-008	1-012	0-0
1230	120-	0-050	0-150	0-174	0-782	0-958	0-447	0-014	0-296	31.00	0-011	0-975	2-350
1245	135-	0-085	0-185	0-130	0-777	1-029	0-403	0-0	0-0	0-0	0-014	0-931	0-0
1300	150-	0-130	0-230	0-088	0-755	0-866	0-350	0-034	0-0	0-0	0-020	0-907	0-0
1315	165-	0-175	0-270	0-098	0-695	0-793	0-311	0-0	0-0	0-0	0-025	0-864	0-0
1330	180-	0-219	0-310	0-096	0-656	0-751	0-260	0-065	0-373	30.00	0-032	0-817	2-372
1345	195-	0-270	0-355	0-094	0-589	0-685	0-218	0-0	0-0	0-0	0-043	0-767	0-0
1400	210-	0-306	0-395	0-083	0-542	0-619	0-174	0-103	0-0	0-0	0-047	0-728	0-0
1415	225-	0-343	0-425	0-092	0-478	0-569	0-137	0-0	0-0	0-0	0-066	0-692	0-0
1430	240-	0-375	0-460	0-085	0-415	0-495	0-110	0-141	0-401	32.00	0-077	0-641	1-972
1445	255-	0-413	0-495	0-086	0-361	0-442	0-086	0-0	0-0	0-0	0-099	0-605	0-0
1500	270-	0-442	0-515	0-078	0-304	0-382	0-066	0-176	0-0	0-0	0-113	0-558	0-0
1515	285-	0-474	0-540	0-080	0-269	0-344	0-051	0-0	0-0	0-0	0-142	0-539	0-0
1530	300-	0-493	0-460	0-076	0-227	0-301	0-038	0-203	0-361	31.00	0-164	0-506	2-037
1545	315-	0-507	0-570	0-076	0-199	0-271	0-029	0-0	0-0	0-0	0-193	0-490	0-0
1600	330-	0-524	0-595	0-073	0-161	0-233	0-024	0-227	0-0	0-0	0-230	0-461	0-0
1615	345-	0-534	0-600	0-073	0-146	0-218	0-018	0-0	0-0	0-0	0-268	0-451	0-0
1630	360-	0-540	0-600	0-072	0-122	0-194	0-017	0-238	0-342	32.00	0-318	0-432	1-882

----- NO DATA TAKEN ----- DATA DISCARDED 7 QUESTIONABLE DATA

EC-4 PROPENE
EVACUABLE CHAMBER
1974 JAN 24

AVE WALL TEMP(1) = 85.0
AVE RADION = 1.80
AVE RH = 45.0
AVE SOLAR SIMULATOR POWER = 18.5

CLOCK	ELAPSED	TW1	REL HUM	SSPWER	RADION	CO	ACETALD	PROPALD	ACETONE
TIME	(MIN)	(DEG F)	(%)	(KW)	(MV)	(PPM)	(PPM)	(PPM)	(PPM)
1030	0.	85.0	50.0	17.80	1.76	3.12	0.003	0.0010	0.006
1045	15.	85.0	50.0	17.13	1.81	3.15	0.003	0.003	0.006
1100	30.	84.7	50.0	18.51	1.81	3.12	0.003	0.003	0.006
1115	45.	85.0	48.5	18.10	1.77	3.15	0.003	0.003	0.006
1130	60.	85.0	49.0	18.09	1.75	3.12	0.227	0.0010	0.012
1145	75.	85.0	48.0	17.95	1.75	3.12	0.003	0.003	0.006
1200	90.	84.8	48.0	18.50	1.80	3.12	0.003	0.003	0.006
1215	105.	85.0	47.5	18.20	1.79	3.12	0.003	0.003	0.006
1230	120.	85.0	46.5	18.35	1.78	3.19	0.395	0.0030	0.029
1245	135.	85.0	46.0	18.35	1.78	3.12	0.003	0.003	0.006
1300	150.	85.0	45.5	18.09	1.77	3.23	0.003	0.003	0.006
1315	165.	85.0	45.0	18.20	1.75	3.12	0.003	0.003	0.006
1330	180.	84.9	45.0	18.70	1.81	3.27	0.448	0.0050	0.059
1345	195.	85.0	44.0	18.60	1.81	3.12	0.003	0.003	0.006
1400	210.	85.0	44.0	18.90	1.83	3.12	0.003	0.003	0.006
1415	225.	85.0	43.5	18.90	1.81	3.38	0.003	0.003	0.006
1430	240.	85.0	43.0	18.85	1.82	3.42	0.339	0.0060	0.088
1445	255.	85.0	42.0	18.90	1.81	3.50	0.003	0.003	0.006
1500	270.	85.0	41.5	18.90	1.81	3.53	0.003	0.003	0.006
1515	285.	85.0	40.5	18.90	1.82	3.50	0.003	0.003	0.006
1530	300.	85.0	40.5	18.90	1.82	3.50	0.328	0.0060	0.160
1545	315.	85.0	40.0	18.90	1.81	3.57	0.003	0.003	0.006
1600	330.	85.0	39.0	18.90	1.81	3.69	0.003	0.003	0.006
1615	345.	85.0	38.5	19.00	1.82	3.72	0.310	0.0030	0.134
1630	360.	85.0							

7 QUESTIONABLE DATA

DATA DISCARDED

NO DATA TAKEN

EC-5 PROPENE
EVACUABLE CHAMBER
1974 JAN 25

SIMULATOR ON 1045, GPF 1650 0.25 INCH PYREX FILTER
SAMPLE TEMPI ERC THERMOCOUPLE, NEAR WALL NW PORT
54 GC SAMPLES TAKEN, WAST FACTOR 1.6, CO FACTOR 0.76/19, PAN CALIBR. 1

CLOCK TIME	ELAPSED TIME(MIN)	OZONE (PPM)	OXIDANT (PPM)	NO (PPM)	NO2-PAN (PPM)	NOX-PAN (PPM)	PROPENE (PPM)	PAN (PPM)	HCHO (PPM)	HCHO VOL (L)	03-PAN /NO2	TOT N (PPM)	TOT C (PPM)
1045	0-	0-0	0-0	0-551	0-047	0-599	0-970	0-0	0-0	24.00	0-0	0-598	2-935
1100	15-	0-0	0-0	0-466	0-120	0-591	0-934	0-000	0-000	0-000	0-0	0-586	0-000
1115	30-	0-002	0-0	0-325	0-240	0-576	0-867	0-000	0-000	0-000	0-003	0-565	0-000
1130	45-	0-022	0-0	0-192	0-350	0-550	0-798	0-000	0-000	0-000	0-012	0-546	0-000
1145	60-	0-079	0-005	0-114	0-401	0-517	0-699	0-007	0-051	31.00	0-022	0-522	2-578
1200	75-	0-181	0-000	0-088	0-377	0-467	0-590	0-000	0-000	0-000	0-042	0-490	0-000
1215	90-	0-291	0-215	0-082	0-328	0-412	0-489	0-044	0-000	0-000	0-072	0-454	0-000
1230	105-	0-378	0-270	0-074	0-269	0-347	0-385	0-000	0-000	0-000	0-104	0-416	0-000
1245	120-	0-432	0-300	0-073	0-213	0-289	0-293	0-101	0-396	31.00	0-143	0-388	2-582
1300	135-	0-458	0-325	0-074	0-171	0-250	0-229	0-000	0-000	0-000	0-200	0-367	0-000
1315	150-	0-471	0-325	0-072	0-143	0-211	0-179	0-143	0-000	0-000	0-237	0-358	0-000
1330	165-	0-473	0-325	0-072	0-118	0-186	0-145	0-000	0-000	0-000	0-290	0-346	0-000
1345	180-	0-466	0-320	0-070	0-095	0-164	0-110	0-169	0-482	31.00	0-343	0-334	2-383
1400	195-	0-455	0-310	0-071	0-082	0-149	0-092	0-000	0-000	0-000	0-395	0-326	0-000
1415	210-	0-439	0-300	0-062	0-072	0-133	0-075	0-179	0-000	0-000	0-341	0-313	0-000
1430	225-	0-430	0-290	0-062	0-076	0-140	0-000	0-000	0-000	0-000	0-355	0-312	0-000
1445	240-	0-422	0-285	0-060	0-072	0-133	0-051	0-169	0-443	30.00	0-353	0-3-1	2-373
1500	255-	0-409	0-280	0-058	0-071	0-128	0-000	0-000	0-000	0-000	0-334	0-295	0-000
1515	270-	0-404	0-275	0-058	0-067	0-123	0-035	0-155	0-000	0-000	0-348	0-289	0-000
1530	285-	0-397	0-270	0-054	0-067	0-124	0-000	0-000	0-000	0-000	0-322	0-282	0-000
1545	300-	0-391	0-270	0-052	0-068	0-120	0-027	0-158	0-423	29.00	0-299	0-277	2-162
1600	315-	0-387	0-260	0-054	0-066	0-118	0-000	0-000	0-000	0-000	0-317	0-274	0-000
1615	330-	0-384	0-275	0-050	0-066	0-117	0-019	0-149	0-000	0-000	0-295	0-265	0-000
1630	345-	0-382	0-260	0-050	0-065	0-117	0-000	0-000	0-000	0-000	0-279	0-266	0-000
1645	360-	0-378	0-260	0-049	0-065	0-114	0-012	0-145	0-398	29.00	0-285	0-259	1-964

***** NO DATA TAKEN ----- DATA DISCARDED 7 QUESTIONABLE DATA

EC-5 PROPENE
EVACUABLE CHAMBER
1974 JUN 25

AVE SAMPLE TEMP(1) = 86.3
AVE WALL TEMP(1) = 85.1
AVE RADION = 1.78
AVE RH = 44.0
AVE SOLAR SIMULATOR POWER = 18.3

CLOCK TIME	ELAPSED TIME(MIN)	TS1 (DEG F)	TU1 (DEG F)	REL HUM (%)	SSPOWER (KW)	RADION (MV)	CO (PPH)	ACETALD (PPH)	PROPALD (PPH)	ACETONE (PPH)
1045	0.	83.5	85.0	50.0	18.35	1.81	2.04	0.003	0.0010	0.005
1100	15.	83.5	85.0	50.0	18.00	1.80	2.04	0.003	0.0010	0.005
1115	30.	83.4	84.7	49.0	18.10	1.77	2.08	0.003	0.0010	0.005
1130	45.	84.1	85.1	49.0	18.00	1.77	1.96	0.003	0.0010	0.005
1145	60.	84.5	84.8	48.0	17.95	1.76	2.06	0.174	0.0020	0.021
1200	75.	84.6	85.0	48.5	18.00	1.76	2.08	0.003	0.0010	0.005
1215	90.	84.9	85.0	47.0	18.50	1.80	2.16	0.003	0.0010	0.005
1230	105.	85.1	85.0	46.0	18.29	1.81	2.24	0.397	0.0040	0.099
1245	120.	85.3	85.0	45.5	18.30	1.79	2.32	0.003	0.0010	0.005
1300	135.	85.7	85.0	45.0	18.65	1.79	2.40	0.003	0.0010	0.005
1315	150.	85.9	84.8	45.0	18.45	1.79	2.44	0.003	0.0010	0.005
1330	165.	86.2	85.0	45.0	18.45	1.79	2.52	0.003	0.0010	0.005
1345	180.	86.9	85.5	43.0	18.45	1.78	2.60	0.003	0.0010	0.005
1400	195.	86.4	85.5	43.5	18.40	1.80	2.72	0.003	0.0010	0.005
1415	210.	86.5	85.5	43.5	18.30	1.78	2.64	0.003	0.0010	0.005
1430	225.	86.9	85.5	43.5	18.33	1.77	2.64	0.003	0.0010	0.005
1445	240.	87.2	85.5	42.0	18.33	1.77	2.64	0.003	0.0010	0.005
1500	255.	87.5	85.5	41.5	18.29	1.77	2.64	0.003	0.0010	0.005
1515	270.	87.7	85.5	41.5	18.16	1.78	2.64	0.003	0.0010	0.005
1530	285.	87.9	85.2	40.0	18.11	1.77	2.84	0.003	0.0010	0.005
1545	300.	88.2	85.0	40.0	18.20	1.78	2.84	0.003	0.0010	0.005
1600	315.	88.4	85.0	39.0	18.21	1.77	2.84	0.003	0.0010	0.005
1615	330.	88.7	85.3	39.0	18.50	1.79	2.88	0.003	0.0010	0.005
1630	345.	88.8	85.3	39.0	18.50	1.79	2.88	0.003	0.0010	0.005
1645	360.	88.8	85.3	39.0	18.50	1.79	2.88	0.003	0.0010	0.005

7 QUESTIONABLE DATA

DATA DISCARDED

NO DATA TAKEN

EC-6 NITROGEN
EVACUABLE CHAMBER
1974 JAN 29

SIMULATOR ON 1015
HC SAMPLE TIMES ARE WITHIN 15 MIN OF INDICATED TIME
24 GC SAMPLES; MAST FACTOR 1.6
CC AND PAN NOT MEASURED

CLOCK TIME	ELAPSED TIME (MIN)	OZONE (PPM)	OXIDANT (PPM)	NO (PPM)	NO2-PAN (PPM)	NOX-PAN (PPM)	HCNO (PPM)	HCNO VOL (L)	O3+NO /NO2	TOT N (PPM)	TOT C (PPM)
1015	0.	0.0	0.0	0.006	0.000	0.006	0.0	34.00	0.0	0.006	0.006
1045	30.	0.0	0.005	0.005	0.001	0.006	0.0	0.000	0.0	0.006	0.006
1115	60.	0.001	0.0	0.005	0.002	0.007	0.0	0.000	0.002	0.006	0.006
1145	90.	0.004	0.0	0.006	0.003	0.008	0.0	30.00	0.008	0.009	0.009
1215	120.	0.004	0.0	0.005	0.004	0.009	0.0	0.000	0.008	0.009	0.009
1250	150.	0.004	0.0	0.005	0.003	0.009	0.0	52.00	0.013	0.009	0.009
1324	180.	0.012	0.0	0.006	0.004	0.010	0.0	0.000	0.015	0.010	0.010
1402	227.	0.014	0.0	0.005	0.005	0.011	0.0	0.000	0.014	0.010	0.010
1430	255.	0.016	0.0	0.005	0.005	0.011	0.0	0.000	0.014	0.011	0.011
1459	284.	0.019	0.0	0.006	0.005	0.011	0.0	0.000	0.025	0.011	0.011
1545	330.	0.022	0.0	0.006	0.005	0.011	0.0	0.000	0.028	0.011	0.011

----- NO DATA TAKEN ----- DATA DISCARDED ? QUESTIONABLE DATA

EC-6 NITROGEN
EVACUABLE CHAMBER
1974 JAN 29

AVE WALL TEMP(1) = 83.3
AVE RADION = 1.78
AVE SOLAR SIMULATOR POWER = 17.8

CLOCK TIME	ELAPSED TIME(MIN)	TWL (DEG F)	SSPOMR (KW)	RACIOM (MV)	ACETALD (PPM)	PROPALD (PPM)	ACETONE (PPM)	MEK (PPM)
1015	0.	81.0	18.20	1.80	0.001	0.005	0.005	0.001
1045	30.	85.5	17.75	1.80	0.001	0.005	0.005	0.001
1115	60.	85.5	17.15	1.80	0.001	0.005	0.006	0.001
1145	90.	85.5	18.02	1.80	0.001	0.005	0.007	0.001
1215	120.	85.5	18.02	1.80	0.001	0.005	0.007	0.001
1250	155.	85.5	18.10	1.80	0.001	0.005	0.008	0.001
1324	189.	85.5	17.80	1.76	0.002	0.005	0.008	0.001
1402	227.	85.5	17.80	1.77	0.002	0.005	0.009	0.001
1430	255.	85.5	17.80	1.75	0.002	0.005	0.010	0.001
1459	284.	85.5	17.80	1.75	0.002	0.005	0.012	0.001
1545	330.	85.5	17.80	1.75	0.002	0.005	0.012	0.001

***** NO DATA TAKEN ----- DATA DISCARDED 7 QUESTIONABLE DATA

EC-7 PROPENE
EVACUABLE CHAMBER
1974 JAN 30
SIMULATOR ON 1045
SAMPLE TEMP: NEAR WALL NW PNT: CORRECTED BY -2.5 DEG F, THERMOCOUPLE
TOUCHING GLASS PROBE
BEGIN WALL COOLING AT 1348: RESET TO HEAT 85 DEG F AT 1407
49 GC SAMPLES TAKEN, MAST FACTOR 1.4, CO FACTOR 0.76/20, PAN CALIBR. 1
ADDITIONAL FILTER PLACED ON MAKEUP AIR SYSTEM
MAKEUP AIR CONTAMINATED WITH ACETONE AND MEK, SEE EC-8

CLOCK TIME	ELAPSED TIME(MIN)	OZONE (PPM)	OXIDANT (PPM)	NO (PPM)	NO2-PAN (PPM)	NOX-PAN (PPM)	PROPENE (PPM)	PAN (PPM)	HCHO (PPM)	HCHO VOL (L)	O3+NO /NO2	TOT N (PPM)	TOT C (PPM)
1045	0.	0.0	----	0.530	0.055	0.288	0.470	0.0	-----	30.00	0.0	0.586	-----
1100	15.	0.0	----	0.470	0.114	0.289	0.443	-----	-----	-----	0.0	0.584	-----
1115	30.	0.0	----	0.396	0.181	0.284	0.402	0.0	-----	-----	0.0	0.577	-----
1130	45.	0.005	----	0.310	0.252	0.270	0.366	-----	-----	-----	0.006	0.563	-----
1145	60.	0.010	----	0.228	0.308	0.252	0.320	0.002	-----	30.00	0.007	0.538	-----
1200	75.	0.021	----	0.172	0.357	0.227	0.287	-----	-----	-----	0.010	0.533	-----
1215	90.	0.044	-----	0.131	0.371	0.208	0.256	0.006	-----	-----	0.016	0.504	-----
1230	105.	0.071	-----	0.110	0.372	0.484	0.229	-----	-----	-----	0.021	0.493	-----
1245	120.	0.099	0.140	0.096	0.356	0.458	0.203	0.015	0.208	29.00	0.027	0.467	-----
1300	135.	0.130	0.170	0.092	0.342	0.436	0.171	-----	-----	-----	0.035	0.455	-----
1315	150.	0.165	0.205	0.089	0.322	0.409	0.147	0.026	-----	-----	0.045	0.437	-----
1330	165.	0.197	0.230	0.084	0.296	0.382	0.128	-----	-----	-----	0.056	0.414	-----
1345	180.	0.224	0.255	0.083	0.277	0.359	0.097	0.043	0.254	33.00	0.067	0.402	1.330
1400	195.	0.250	0.275	0.078	0.247	0.324	-----	-----	-----	-----	0.079	0.377	-----
1415	210.	0.264	0.300	0.073	0.218	0.295	0.071	0.062	-----	-----	0.089	0.353	-----
1430	225.	0.284	0.315	0.072	0.197	0.269	-----	-----	-----	-----	0.126	0.324	-----
1445	240.	0.303	0.325	0.072	0.173	0.245	-----	0.079	0.263	28.00	0.145	0.312	-----
1500	255.	0.319	0.340	0.071	0.155	0.226	-----	-----	-----	-----	0.162	0.256	-----
1515	270.	0.338	0.360	0.066	0.138	0.208	0.033	0.092	-----	-----	0.193	0.288	-----
1530	285.	0.351	0.370	0.067	0.122	0.188	-----	-----	-----	-----	0.202	0.276	1.175
1545	300.	0.362	0.380	0.061	0.110	0.171	0.021	0.105	0.240	30.00	0.248	0.266	-----
1600	315.	0.371	0.385	0.062	0.093	0.156	-----	-----	-----	-----	0.291	0.265	-----
1615	330.	0.378	0.395	0.065	0.084	0.143	0.014	0.116	-----	-----	0.301	0.252	-----
1630	345.	0.380	0.400	0.060	0.076	0.135	-----	-----	0.204	27.00	0.312	0.247	1.239
1645	360.	0.382	0.400	0.059	0.072	0.125	0.009	0.116	-----	-----	-----	-----	-----

----- NO DATA TAKEN ----- DATA DISCARDED 7 QUESTIONABLE DATA

EC-7 PROPENE
EVACUABLE CHAMBER
1974 JAN 30

AVE SAMPLE TEMP(1) = 87.6
AVE MALL TEMP(1) = 84.2
AVE RADION = 1.80
AVE RH = 49.5
AVE SOLAR SIMULATOR POWER = 17.9

CLOCK TIME	ELAPSED TIME (MIN)	TSL (DEG F)	TW1 (DEG F)	REL HUM (%)	SSPOWER (KW)	RADION (MV)	CO (PPH)	ACETALD (PPH)	PROPALD (PPH)	ACETONE (PPH)	HEX (PPH)
1045	0-	86.0	85.0	54.0	17.60	1.83	1.98	0.003	0.0010	0.009	0.003
1100	15-	86.1	85.0	54.5	18.00	1.82	1.98	0.003	0.003	0.009	0.003
1115	30-	86.5	85.0	54.5	18.00	1.82	1.98	0.003	0.003	0.009	0.003
1130	45-	86.7	85.0	54.0	17.70	1.80	2.05	0.003	0.003	0.009	0.003
1145	60-	86.9	85.0	53.0	17.80	1.79	1.98	0.128	0.0010	0.022	0.010
1200	75-	87.2	85.0	52.0	17.75	1.79	2.01	0.003	0.003	0.009	0.003
1215	90-	87.5	85.0	51.0	17.75	1.80	2.01	0.003	0.003	0.009	0.003
1230	105-	87.8	85.0	51.0	17.80	1.79	2.01	0.003	0.003	0.009	0.003
1245	120-	88.1	85.0	51.0	17.80	1.79	2.05	0.003	0.003	0.009	0.003
1300	135-	88.5	85.0	49.0	17.60	1.76	2.13	0.003	0.003	0.009	0.003
1315	150-	88.7	85.0	48.5	17.95	1.80	2.09	0.003	0.003	0.009	0.003
1330	165-	89.0	85.0	48.5	17.90	1.81	2.13	0.003	0.003	0.009	0.003
1345	180-	89.3	85.0	47.5	18.11	1.81	2.24	0.230	0.0030	0.068	0.007
1400	195-	85.0	75.0	47.5	17.85	1.78	2.28	0.003	0.003	0.009	0.003
1415	210-	84.9	85.0	53.0	17.95	1.80	2.20	0.003	0.003	0.009	0.003
1430	225-	85.9	85.0	53.0	18.00	1.81	2.24	0.003	0.003	0.009	0.003
1445	240-	86.6	85.0	53.0	18.95	1.81	2.28	0.003	0.003	0.009	0.003
1500	255-	87.3	85.0	49.0	18.09	1.82	2.32	0.003	0.003	0.009	0.003
1515	270-	88.0	85.0	49.0	18.11	1.81	2.36	0.003	0.003	0.009	0.003
1530	285-	88.4	85.0	47.5	17.81	1.79	2.39	0.003	0.003	0.009	0.003
1545	300-	88.7	85.0	45.5	17.90	1.79	2.39	0.176	0.0050	0.085	0.010
1600	315-	89.1	85.0	44.0	17.89	1.78	2.39	0.003	0.003	0.009	0.003
1615	330-	89.4	85.0	44.0	17.80	1.79	2.43	0.003	0.003	0.009	0.003
1630	345-	89.7	85.0	43.5	17.80	1.77	2.51	0.003	0.003	0.009	0.003
1645	360-	89.9	85.0	42.5	17.80	1.80	2.47	0.169	0.0050	0.107	0.015

***** NO DATA TAKEN

----- DATA DISCARDED

7 QUESTIONABLE DATA

EC-8 PROPENE
EVACUABLE CHAMBER
1974 JAN 31

SIMULATOR ON 1130 0.25 INCH PYREX FILTER
SAMPLE TEMP: NEAR WALL NW PORT: CORRECTION FOR IRRAD HEATING 0.29 DEG F
58 GC SAMPLES TAKEN, WAST FACTOR 1.6, CD FACTOR 0.76/20, PAN CALIBR. 1
NEW FILTER ON MAKEUP AIR SYSTEM PRODUCING ACETONE (920 PPB) AND
PERK1580 PPB) MEASURED AT END OF RUN

CLOCK TIME	ELAPSED TIME (MIN)	OZONE (PPH)	OXIDANT (PPH)	NO (PPH)	NO2-PAN (PPH)	NO2-PAN (PPH)	PROPENE (PPH)	PAN (PPH)	HCHO (PPH)	HCHO VOL (L)	034NO /NO2	TOT N (PPH)	TOT C (PPHC)
1130	0.	0.0	---	0.527	0.060	0.588	0.110	0.0	0.007	30.00	0.0	0.587	0.474
1145	15.	0.001	---	0.493	0.082	0.575	0.094	0.000	0.000	0.000	0.005	0.575	0.474
1200	30.	0.001	---	0.467	0.101	0.572	0.086	0.0	0.000	0.000	0.004	0.568	0.474
1215	45.	0.0	---	0.434	0.122	0.565	0.078	0.000	0.000	0.000	0.0	0.557	0.474
1230	60.	0.0	---	0.406	0.143	0.433	0.070	0.0	0.027	31.00	0.0	0.551	0.495
1245	75.	0.0	---	0.383	0.156	0.341	0.062	0.000	0.000	0.000	0.0	0.539	0.474
1300	90.	0.001	---	0.348	0.180	0.533	0.057	0.0	0.000	0.000	0.002	0.528	0.474
1315	105.	0.001	---	0.318	0.204	0.527	0.054	0.000	0.000	0.000	0.001	0.522	0.474
1330	120.	0.002	---	0.290	0.214	0.510	0.048	0.0	0.052	32.00	0.002	0.504	0.538
1345	135.	0.005	---	0.264	0.228	0.497	0.042	0.000	0.000	0.000	0.006	0.492	0.474
1400	150.	0.005	---	0.241	0.242	0.491	0.041	0.001	0.000	0.000	0.005	0.484	0.474
1415	165.	0.006	---	0.218	0.251	0.478	0.035	0.000	0.000	0.000	0.005	0.470	0.474
1430	180.	0.008	0.035	0.203	0.263	0.468	0.033	0.000	0.000	0.000	0.008	0.456	0.474
1445	195.	0.012	0.040	0.181	0.274	0.456	0.030	0.000	0.000	0.000	0.009	0.443	0.474
1500	210.	0.014	0.045	0.168	0.274	0.444	0.027	0.001	0.000	0.000	0.009	0.430	0.474
1515	225.	0.016	0.045	0.151	0.277	0.431	0.024	0.000	0.000	0.000	0.011	0.419	0.422
1530	240.	0.022	0.050	0.137	0.280	0.418	0.024	0.002	0.075	31.00	0.013	0.407	0.422
1545	255.	0.027	0.060	0.128	0.277	0.406	0.021	0.000	0.000	0.000	0.016	0.400	0.422
1600	270.	0.037	0.060	0.119	0.279	0.398	0.019	0.002	0.000	0.000	0.016	0.384	0.422
1615	285.	0.042	0.070	0.107	0.275	0.383	0.018	0.000	0.000	0.000	0.016	0.379	0.422
1630	300.	0.050	0.080	0.100	0.277	0.379	0.016	0.003	0.072	33.00	0.021	0.365	0.422
1645	315.	0.059	0.085	0.095	0.268	0.364	0.015	0.000	0.000	0.000	0.022	0.352	0.422
1700	330.	0.067	0.095	0.088	0.262	0.353	0.014	0.002	0.000	0.000	0.024	0.349	0.422
1715	345.	0.077	0.105	0.083	0.263	0.346	0.011	0.000	0.045	0.000	0.026	0.334	0.817
1730	360.	0.084	0.115	0.078	0.252	0.332	0.009	0.004	0.000	0.000	0.026	0.334	0.817

----- NO DATA TAKEN ----- DATA DISCARDED ----- QUESTIONABLE DATA

EC-8 PROPENE
EVACUABLE CHAMBER
1974 JAN 31

AVE SAMPLE TEMP(1) = 88.1
AVE WALL TEMP(1) = 81.9
AVE RADOM = 1.80
AVE RH = 45.0
AVE SOLAR SIMULATOR POWER = 18.4

CLOCK TIME	ELAPSED TIME(MIN)	TS1 (DEG F)	TW1 (DEG F)	REL HUM (%)	SSPOMER (KW)	RADOM (MV)	CO (PPM)	ACETALD (PPM)	PROPALD (PPM)	ACETONE (PPM)	MEK (PPM)
1130	0.	84.9	83.0	53.0	18.20	1.74	2.05	0.005	0.0010	0.024	0.013
1145	15.	85.1	82.7	50.0	18.05	1.79	2.09	0.005	0.0010	0.024	0.013
1200	30.	85.2	82.5	50.0	18.02	1.79	2.09	0.005	0.0010	0.024	0.013
1215	45.	85.6	82.5	50.5	17.90	1.75	2.09	0.005	0.0010	0.024	0.013
1230	60.	85.9	82.0	50.5	18.20	1.79	2.09	0.005	0.0010	0.024	0.013
1245	75.	86.3	82.0	50.5	18.11	1.77	2.05	0.005	0.0010	0.024	0.013
1300	90.	86.5	81.6	45.5	18.00	1.77	2.13	0.005	0.0010	0.024	0.013
1315	105.	86.9	81.7	45.5	17.80	1.75	2.05	0.005	0.0010	0.024	0.013
1330	120.	87.2	81.7	45.0	18.10	1.76	2.09	0.005	0.0010	0.024	0.013
1345	135.	87.4	81.0	45.0	18.80	1.83	2.13	0.005	0.0010	0.024	0.013
1400	150.	87.8	81.0	47.5	18.90	1.82	2.13	0.005	0.0010	0.024	0.013
1415	165.	88.1	81.0	47.5	18.65	1.83	2.17	0.005	0.0010	0.024	0.013
1430	180.	88.3	81.0	47.0	18.65	1.82	2.20	0.005	0.0010	0.024	0.013
1445	195.	88.6	81.0	46.5	18.55	1.81	2.20	0.005	0.0010	0.024	0.013
1500	210.	88.9	81.0	46.0	18.90	1.82	2.17	0.005	0.0010	0.024	0.013
1515	225.	89.1	81.0	45.5	18.35	1.83	2.24	0.005	0.0010	0.024	0.013
1530	240.	89.4	81.5	44.5	18.60	1.83	2.28	0.005	0.0010	0.024	0.013
1545	255.	89.7	81.0	43.5	18.89	1.83	2.24	0.005	0.0010	0.024	0.013
1600	270.	89.9	82.0	43.5	18.89	1.86	2.20	0.005	0.0010	0.024	0.013
1615	285.	90.1	81.5	42.5	18.89	1.85	2.28	0.005	0.0010	0.024	0.013
1630	300.	90.4	81.0	42.0	18.89	1.77	2.28	0.005	0.0010	0.024	0.013
1645	315.	90.0	81.0	41.5	18.55	1.78	2.28	0.005	0.0010	0.024	0.013
1700	330.	90.3	81.0	41.0	18.21	1.79	2.28	0.005	0.0010	0.024	0.013
1715	345.	90.4	81.0	40.5	18.25	1.70	2.28	0.005	0.0010	0.024	0.013
1730	360.	90.6	82.5	40.5	18.25	1.70	2.28	0.005	0.0010	0.024	0.013

7 QUESTIONABLE DATA

DATA DISCARDED

NO DATA TAKEN

EC-9 PURE AIR
EVACUABLE CHAMBER
1974 FEB 1

SIMULATOR ON 1015, 0.25 INCH PYREX FILTER, NEW MAKEUP AIR FILTER REMOVED
LIGHTS COUSED FOR SHORT INTERVALS DURING RUN
SAMPLE TEMP: NEAR WALL NW PORT 1015-1145, CENTER SE PORT 1158-1615;
CORRECTION FOR IRAC HEATING 0.7 AND 1.0 DEG F, RESPECTIVELY
SAMPLE TEMP MEASURED AT VARIOUS DEPTHS IN CHAMBER
BEGIN WALL COOLING AT 1516
39 GC SAMPLES, NAST FACTOR 1.6, CO FACTOR 0.76/18, PAN CALIBR. 1

CLOCK ELAPSED TIME (MIN)	OZONE (PPM)	OXIDANT (PPM)	NO (PPM)	NO2-PAN (PPM)	NOX-PAN (PPM)	PAN (PPM)	HCNO (PPM)	HCNO VOL (L)	Q340 /NO2	TOT N (PPM)	TOY C (PPMC)
1015	0.	0.0	0.0	0.077	0.005	0.080	0.0	*****	0.0	0.082	*****
1030	15.	0.0	0.005	0.085	0.005	0.089	*****	*****	0.0	0.090	*****
1045	30.	0.001	0.005	0.088	0.006	0.095	*****	60.00	0.012	0.094	*****
1115	60.	0.004	0.005	0.088	0.007	0.094	0.0	*****	0.049	0.093	*****
1145	90.	0.010	0.015	0.088	0.007	0.095	*****	*****	0.120	0.093	*****
1215	120.	0.013	0.015	0.088	0.008	0.096	0.0	*****	0.139	0.096	*****
1245	150.	0.016	0.020	0.085	0.010	0.094	*****	*****	0.142	0.095	*****
1315	180.	0.021	0.020	0.083	0.010	0.094	*****	0.008	0.168	0.094	*****
1345	210.	0.023	0.025	0.082	0.009	0.090	*****	53.00	0.210	0.091	*****
1415	240.	0.027	0.025	0.079	0.010	0.089	0.0	*****	0.224	0.087	*****
1450	275.	0.031	0.030	0.080	*****	0.090	*****	*****	0.000	*****	*****
1515	300.	0.033	0.030	*****	*****	*****	0.0	*****	0.033	*****	*****
1545	330.	0.035	0.0407	0.075	0.011	0.086	*****	0.014	0.232	0.084	*****
1615	360.	0.036	0.030	0.079	0.012	0.091	*****	*****	0.238	0.091	*****

***** NO DATA TAKEN ----- DATA DISCARDED 7 QUESTIONABLE DATA

EC-9 PURE AIR
EVACUABLE CHAMBER
1974 FEB 1

AVE SAMPLE TEMP(1) = 86.0
AVE WALL TEMP(1) = 83.9
AVE RADION = 1.78
AVE RH = 47.5
AVE SOLAR SIMULATOR POWER = 18.3

CLOCK TIME	ELAPSED TIME(MIN)	TS1 (DEG F)	TW1 (DEG F)	REL HUM (%)	SSPOWER (KW)	RADION (MV)	CO (PPM)	ACETALD (PPM)	PROPALD (PPM)	ACETONE (PPM)	MEK (PPM)
1015	0-	81.6	85.0	*****	18.35	1.78	1.31	0.006	0.0010	0.008	0.000
1030	15-	83.0	*****	50.0	18.15	1.79	1.31	*****	*****	*****	*****
1045	30-	86.8	*****	49.5	18.09	1.77	1.27	*****	*****	*****	*****
1115	60-	84.9	*****	48.5	18.20	1.78	1.31	0.007	0.0010	0.012	0.001
1145	90-	86.0	*****	48.0	17.95	1.76	1.31	*****	*****	*****	*****
1215	120-	*****	85.0	47.0	18.25	1.76	1.39	0.006	0.0010	0.013	0.001
1245	150-	*****	85.0	46.5	18.15	1.74	1.39	*****	*****	*****	*****
1315	180-	*****	85.0	45.5	17.85	1.74	1.48	0.007	0.0010	0.017	0.000
1345	210-	*****	*****	*****	17.85	1.72	*****	*****	*****	*****	*****
1415	240-	88.9	85.0	44.5	18.35	1.79	1.52	0.008	0.0010	0.020	0.001
1450	275-	89.4	85.0	44.0	18.80	1.80	1.60	*****	*****	*****	*****
1515	300-	89.5	85.0	43.5	18.85	1.81	1.60	0.009	0.0020	0.020	*****
1545	330-	84.1	80.0	50.5	18.70	1.80	1.69	*****	*****	*****	*****
1615	360-	*****	80.0	52.5	18.85	1.82	1.65	0.010	0.0020	0.030	0.001

***** NO DATA TAKEN ----- DATA DISCARDED ? QUESTIONABLE DATA

EC-10 PROPENE
EVACUABLE CHAMBER
1974 FEB 5

BEGIN IRRADIATION 1130: 0.25 INCH PYREX FILTER
SAMPLE AND WALL TEMP: IRON-CONSTANTAN THERMOCOUPLES REFERENCE 32 DEG F
HCHO VOL AT 1430 ESTIMATED
CHARCOAL AND PURAPIL CHANGED IN MAKEUP AIR SYSTEM FEB 4
TECO MALFUNCTIONING: HIGH VALUES IN BOTH NO AND NOX MODES
TECO FLOW RATE REDUCED FROM 895 TO 690 ML/MIN
MAST FACTOR 1.6, CO FACTOR 0.76/19, PAN CALIBR. 1

CLOCK TIME	ELAPSED TIME(MIN)	OZONE (PPM)	OXIDANT (PPM)	NO (PPM)	NO2-PAN (PPM)	NOX-PAN (PPM)	PROPENE (PPM)	PAN (PPM)	HCHO (PPM)	HCHO VOL (L)	O3:NO /NO2	TOT N (PPM)	TOT C (PPM)
1130	0.	0.0	0.0	0.107	0.014	0.120	0.440	0.0	0.0	30.00	0.0	0.121	1.339
1145	15.	0.019	0.025	0.078	0.038	0.115	0.412	0.0	0.0	0.000	0.039	0.116	0.000
1200	30.	0.062	0.065	0.070	0.043	0.113	0.378	0.0	0.0	0.000	0.101	0.107	0.000
1215	45.	0.097	0.100	0.066	0.040	0.106	0.343	0.0	0.0	0.000	0.161	0.104	1.336
1230	60.	0.114	0.120	0.066	0.036	0.101	0.310	0.002	0.106	30.00	0.209	0.104	0.000
1245	75.	0.128	0.125	0.065	0.033	0.097	0.287	0.000	0.000	0.000	0.269	0.101	0.000
1300	90.	0.132	0.123	0.064	0.030	0.093	0.260	0.004	0.000	0.000	0.277	0.098	0.000
1315	105.	0.134	0.130	0.061	0.031	0.091	0.243	0.000	0.000	0.000	0.264	0.097	1.299
1330	120.	0.131	0.125	0.061	0.030	0.090	0.224	0.006	0.159	32.00	0.283	0.095	0.000
1345	135.	0.130	0.125	0.061	0.028	0.089	0.194	0.006	0.000	0.000	0.261	0.095	0.000
1400	150.	0.127	0.120	0.060	0.029	0.088	0.185	0.000	0.000	0.000	0.269	0.095	0.000
1415	165.	0.123	0.116	0.061	0.028	0.087	0.164	0.006	0.176	30.00	0.268	0.092	1.184
1430	180.	0.120	0.113	0.060	0.027	0.087	0.158	0.000	0.000	0.000	0.271	0.091	0.000
1445	195.	0.116	0.110	0.060	0.026	0.084	0.144	0.006	0.000	0.000	0.279	0.090	0.000
1500	210.	0.114	0.105	0.060	0.024	0.084	0.139	0.000	0.000	0.000	0.244	0.091	0.000
1515	225.	0.111	0.105	0.059	0.027	0.084	0.128	0.004	0.190	32.00	0.251	0.091	1.107
1530	240.	0.107	0.100	0.060	0.026	0.086	0.123	0.000	0.000	0.000	0.227	0.094	0.000
1545	255.	0.106	0.103	0.060	0.026	0.084	0.116	0.006	0.000	0.000	0.258	0.090	0.000
1600	270.	0.104	0.100	0.060	0.024	0.083	0.113	0.000	0.000	0.000	0.266	0.088	0.000
1615	285.	0.103	0.098	0.058	0.024	0.083	0.106	0.006	0.181	30.00	0.238	0.088	1.004
1630	300.	0.100	0.090	0.059	0.023	0.083	0.102	0.000	0.000	0.000	0.233	0.089	0.000
1645	315.	0.098	0.090	0.059	0.024	0.082	0.092	0.006	0.000	0.000	0.212	0.089	0.000
1700	330.	0.097	0.090	0.059	0.024	0.083	0.088	0.000	0.187	30.00	0.094	0.088	0.000
1715	345.	0.094	0.085	0.058	0.024	0.083	0.084	0.006	0.000	0.000	0.094	0.088	0.000
1730	360.	0.094	0.085	0.058	0.024	0.083	0.084	0.006	0.000	0.000	0.094	0.088	0.000

***** NO DATA TAKEN ***** DATA DISCARDED ? QUESTIONABLE DATA

EC-10 PROPOSE
EVACUABLE CHAMBER
1974 FEB 5

AVE SAMPLE TEMP(1) = 86.3
AVE WALL TEMP(1) = 85.8
AVE RADICH = 1.80
AVE RH = 47.0
AVE SOLAR SIMULATOR POWER = 18.6

CLOCK TIME	ELAPSED TIME (MIN)	TS1 (DEG F)	TW1 (DEG F)	REL HUM (%)	SSPOWER (KW)	RADIOM (MV)	CO (PPM)	ACETALD (PPM)	ACETONE (PPM)
1130	0.	84.0	84.0	47.0	17.69	1.82	2.64	0.002	0.002
1145	15.	85.4	85.4	47.0	18.75	1.81	2.68	0.002	0.002
1200	30.	86.1	83.7	47.0	18.75	1.82	2.60	0.002	0.002
1215	45.	86.4	85.0	44.5	18.90	1.82	2.68	0.002	0.002
1230	60.	86.4	86.8	46.0	18.80	1.81	2.64	0.112	0.024
1245	75.	87.5	87.5	45.5	18.85	1.80	2.72	0.002	0.002
1300	90.	87.8	86.8	45.5	18.90	1.82	2.72	0.002	0.002
1315	105.	87.8	88.9	45.0	18.55	1.78	2.76	0.186	0.029
1330	120.	87.8	88.2	44.5	18.40	1.78	2.72	0.002	0.002
1345	135.	88.2	89.5	44.0	18.55	1.76	2.76	0.002	0.002
1400	150.	88.2	88.5	43.5	18.55	1.80	2.80	0.002	0.002
1415	165.	88.5	89.9	43.5	18.55	1.76	2.80	0.002	0.002
1430	180.	89.2	89.5	43.0	18.45	1.77	2.80	0.208	0.030
1445	195.	86.8	83.7	43.5	18.85	1.86	2.84	0.002	0.002
1500	210.	85.3	83.7	46.5	18.45	1.82	2.84	0.002	0.002
1515	225.	85.0	84.7	48.0	18.91	1.84	2.84	0.002	0.002
1530	240.	86.4	86.1	49.0	18.99	1.84	2.84	0.221	0.026
1545	255.	85.7	82.6	49.0	18.90	1.81	2.84	0.002	0.002
1600	270.	84.0	83.0	50.0	19.20	1.79	2.92	0.002	0.002
1615	285.	84.0	83.0	49.0	18.40	1.77	2.92	0.202	0.030
1630	300.	84.4	85.0	49.0	18.50	1.77	2.92	0.002	0.002
1645	315.	84.0	81.9	49.0	18.30	1.78	2.92	0.002	0.002
1700	330.	84.0	83.0	51.5	18.30	1.77	2.96	0.002	0.002
1715	345.	84.7	84.0	52.0	18.25	1.80	2.96	0.002	0.002
1730	360.	85.4	85.7	51.0	18.40	1.83	2.96	0.198	0.033

***** NO DATA TAKEN

----- DATA DISCARDED

***** QUESTIONABLE DATA

EC-11 PROPENE
EVACUABLE CHAMBER

1975 FEB 15

SIMULATOR ON 1115 0.25 INCH PYREX FILTER
TECO AND SENDIX USED TO MONITOR NOX1 SAMPLING RATE 495, 150 CC/MIN, RESP.
DATA ARE FROM TECO: 1115, 1200, 1215 DATA IN MANUAL MODE
SAMPLE AND WALL TEMP: IRON-CONSTANTAN THERMOCOUPLES REFERENCE 32 DEG F
SAMPLE TEMP: SE PCRT 33 1/4 INCH FROM INSULATION SURFACE
WALL TEMP: TC TAPED TO STRIPPED SURFACE OF CHAMBER SHELL, 50 END
BEGIN WALL COOLING 1350. NO TEMP CONTROL BEGIN 1534
54 CC SAMPLES TAKEN, MAST FACTOR 1.6, CO FACTOR 0.76/19, PAN CALIBR. 2

CLOCK TIME	ELAPSED TIME(MIN)	OZONE (PPM)	OXIDANT (PPM)	NO (PPM)	NO2-PAN (PPM)	NOX-PAN (PPM)	PROPENE (PPM)	PAN (PPM)	HCNO (PPM)	HCNO VOL (L)	03-NO /NO2	TOT N (PPM)	TOT C (PPM)
1115	0	0.003	0.000	0.115	0.020	0.136	0.447	0.0	0.0	32.00	0.018	0.136	1.351
1130	15	0.017	0.000	0.055	0.077	0.133	0.422	0.000	0.000	0.000	0.012	0.133	0.000
1145	30	0.054	0.000	0.013	0.112	0.244	0.370	0.001	0.000	0.000	0.006	0.126	0.000
1200	45	0.107	0.095	0.007	0.096	0.103	0.327	0.000	0.000	0.000	0.008	0.110	0.000
1215	60	0.156	0.145	0.007	0.081	0.088	0.290	0.013	0.139	29.00	0.014	0.101	1.271
1230	75	0.190	0.170	0.004	0.070	0.076	0.246	0.000	0.000	0.000	0.016	0.095	0.000
1245	90	0.211	0.190	0.006	0.058	0.064	0.211	0.026	0.000	0.000	0.022	0.090	0.000
1300	105	0.223	0.205	0.006	0.048	0.055	0.185	0.000	0.000	0.000	0.028	0.084	0.000
1315	120	0.228	0.2357	0.006	0.043	0.049	0.165	0.034	0.201	30.00	0.032	0.083	1.174
1330	135	0.229	0.205	0.006	0.036	0.042	0.141	0.000	0.000	0.000	0.034	0.078	0.000
1345	150	0.226	0.203	0.006	0.032	0.040	0.128	0.038	0.000	0.000	0.042	0.077	0.000
1400	165	0.224	0.200	0.007	0.029	0.037	0.114	0.000	0.000	0.000	0.056	0.074	0.000
1415	180	0.218	0.193	0.007	0.028	0.036	0.106	0.038	0.228	30.00	0.057	0.073	1.140
1430	195	0.211	0.190	0.007	0.026	0.034	0.095	0.000	0.000	0.000	0.058	0.072	0.000
1445	210	0.207	0.185	0.007	0.025	0.032	0.079	0.038	0.000	0.000	0.059	0.071	0.000
1500	225	0.203	0.180	0.007	0.025	0.032	0.074	0.000	0.000	0.000	0.058	0.070	0.000
1515	240	0.198	0.180	0.007	0.025	0.032	0.064	0.036	0.000	0.000	0.057	0.068	0.000
1533	258	0.191	0.170	0.008	0.025	0.032	0.000	0.000	0.220	51.00	0.065	0.068	0.000
1545	270	0.186	0.165	0.007	0.024	0.031	0.057	0.000	0.000	0.000	0.056	0.066	0.000
1600	285	0.184	0.165	0.007	0.023	0.030	0.000	0.000	0.000	0.000	0.057	0.065	0.000
1615	300	0.181	0.155	0.007	0.021	0.030	0.046	0.034	0.000	0.000	0.061	0.062	0.000
1630	315	0.179	0.155	0.007	0.023	0.031	0.000	0.000	0.000	0.000	0.057	0.062	0.000
1645	330	0.175	0.155	0.007	0.023	0.031	0.040	0.031	0.000	0.000	0.056	0.061	0.000
1700	345	0.176	0.155	0.007	0.023	0.029	0.000	0.000	0.220	30.00	0.055	0.062	0.000
1715	360	0.173	0.155	0.007	0.020	0.027	0.035	0.033	0.000	0.000	0.062	0.060	0.852

----- NO DATA TAKEN ----- DATA DISCARDED ? QUESTIONABLE DATA

EC-11 PROPENE
EVACUABLE CHAMBER
1975 FEB 15

AVE SAMPLE TEMP(1) = 85.5
AVE WALL TEMP(1) = 85.6
AVE RADICH = 1.81
AVE RH = 45.5
AVE SOLAR SIMULATOR POWER = 18.9

CLOCK TIME	ELAPSED TIME(MIN)	TS1 (DEG F)	TWL (DEC F)	REL HUM (%)	SSPWER (KW)	RADIOM (MW)	CO (PPM)	ACETALD (PPM)	PROPALD (PPM)	ACETONE (PPM)
1115	0-	81.9	84.7	46.0	19.15	1.80	1.76	0.002	0.0	0.002
1130	15-	85.0	84.7	45.0	19.00	1.80	1.76	0.002	0.0	0.002
1145	30-	85.4	85.4	45.5	18.80	1.78	1.76	0.002	0.0	0.002
1200	45-	85.4	85.7	45.0	18.40	1.78	1.80	0.002	0.0	0.002
1215	60-	86.1	86.1	44.5	18.50	1.77	1.76	0.100	0.0010	0.011
1230	75-	86.4	86.8	44.0	18.15	1.82	0.002	0.002	0.002	0.002
1245	90-	87.1	86.8	0.002	18.50	1.80	0.002	0.002	0.002	0.002
1300	105-	87.5	87.8	43.0	18.70	1.80	1.80	0.002	0.002	0.002
1315	120-	87.8	88.2	42.5	18.60	1.77	1.88	0.184	0.0010	0.013
1330	135-	88.2	88.5	42.0	18.40	1.77	1.96	0.002	0.002	0.002
1345	150-	88.5	88.9	42.0	18.45	1.75	1.96	0.002	0.002	0.002
1400	165-	89.9	86.1	41.5	19.11	1.85	2.00	0.002	0.002	0.002
1415	180-	85.7	84.0	39.0	19.25	1.84	0.002	0.224	0.0010	0.022
1430	195-	86.1	85.4	41.5	19.30	1.84	2.00	0.002	0.002	0.002
1445	210-	84.7	82.3	41.5	19.31	1.83	2.04	0.002	0.002	0.002
1500	225-	85.0	84.0	48.0	19.40	1.85	2.08	0.002	0.002	0.002
1515	240-	85.0	85.0	48.0	18.45	1.85	0.002	0.202	0.0010	0.020
1533	258-	84.4	82.3	48.5	18.25	1.81	2.12	0.002	0.002	0.002
1545	270-	83.0	84.4	49.0	0.002	1.83	2.12	0.002	0.002	0.002
1600	285-	84.7	84.4	49.5	19.25	1.83	2.12	0.002	0.002	0.002
1615	300-	85.0	85.0	45.5	19.30	1.84	2.12	0.216	0.0010	0.024
1630	315-	85.4	85.7	48.5	19.30	1.83	2.16	0.002	0.002	0.002
1645	330-	85.7	86.1	48.5	19.25	1.80	2.20	0.002	0.002	0.002
1700	345-	85.4	86.1	47.5	19.30	1.82	2.24	0.002	0.002	0.002
1715	360-	85.7	86.4	47.0	19.15	1.80	2.24	0.165	0.0010	0.0437

----- NO DATA TAKEN

----- DATA DISCARDED

7 QUESTIONABLE DATA

EC-12 PROPENE
EVACUABLE CHAMBER
1974 FEB 19

SIMULATOR ON 1115 0.25 INCH PYREX FILTER
TECO USED TO MONITOR NOX
SAMPLE TEMP THERMOCOUPLE WET 1130, DRIED AND REPLACED IN CHAMBER
59 GC SAMPLES TAKEN, MAST FACTOR 1.6, CO FACTOR C.76/17, PAN CALIBR. 2

CLOCK TIME	ELAPSED TIME(MIN)	OZONE (PPM)	OXIDANT (PPM)	NO (PPM)	NO2-PAN (PPM)	NOX-PAN (PPM)	PROPENE (PPM)	PAN (PPM)	HCHO (PPM)	HCHO VOL (L)	O3=NO /NO2	TOT N (PPM)	TOT C (PPM)
1115	0.	0.0	0.0	0.106	0.012	0.118	0.082	0.0	0.0	30.00	0.0	0.118	0.254
1130	15.	0.002	0.005	0.091	0.024	0.115	0.076	0.000	0.000	0.000	0.009	0.115	0.254
1145	30.	0.006	0.010	0.074	0.038	0.115	0.067	0.0	0.000	0.000	0.011	0.113	0.254
1200	45.	0.010	0.015	0.058	0.054	0.113	0.061	0.000	0.000	0.000	0.011	0.112	0.254
1215	60.	0.017	0.020	0.041	0.067	0.109	0.057	0.0	0.027	31.00	0.010	0.108	0.255
1230	75.	0.024	0.025	0.031	0.072	0.105	0.051	0.000	0.000	0.000	0.010	0.104	0.255
1245	90.	0.034	0.025	0.024	0.075	0.099	0.046	0.002	0.000	0.000	0.011	0.101	0.255
1300	105.	0.047	0.050	0.020	0.074	0.093	0.040	0.000	0.000	0.000	0.013	0.097	0.255
1315	120.	0.058	0.050	0.017	0.070	0.087	0.036	0.004	0.042	30.00	0.014	0.091	0.276
1330	135.	0.070	0.063	0.014	0.069	0.084	0.031	0.000	0.000	0.000	0.014	0.089	0.276
1345	150.	0.083	0.060	0.013	0.065	0.077	0.027	0.006	0.000	0.000	0.017	0.084	0.276
1400	165.	0.093	0.085	0.012	0.060	0.072	0.024	0.000	0.000	0.000	0.014	0.079	0.276
1415	180.	0.104	0.095	0.012	0.057	0.066	0.022	0.000	0.000	0.000	0.022	0.077	0.276
1430	195.	0.118	0.105	0.010	0.051	0.061	0.019	0.000	0.000	0.000	0.022	0.071	0.276
1445	210.	0.124	0.110	0.010	0.045	0.055	0.016	0.012	0.000	0.000	0.026	0.067	0.276
1500	225.	0.130	0.115	0.010	0.042	0.050	0.014	0.000	0.000	0.000	0.030	0.065	0.276
1515	240.	0.139	0.125	0.008	0.038	0.046	0.012	0.014	0.063	30.00	0.030	0.060	0.276
1530	255.	0.142	0.130	0.007	0.034	0.042	0.010	0.000	0.000	0.000	0.035	0.056	0.276
1545	270.	0.149	0.130	0.007	0.030	0.039	0.009	0.016	0.000	0.000	0.038	0.053	0.276
1600	285.	0.153	0.135	0.007	0.029	0.036	0.008	0.000	0.000	0.000	0.041	0.050	0.276
1615	300.	0.154	0.140	0.007	0.027	0.034	0.007	0.016	0.063	32.00	0.046	0.049	0.276
1630	315.	0.157	0.140	0.007	0.025	0.032	0.006	0.000	0.000	0.000	0.051	0.048	0.276
1645	330.	0.157	0.140	0.007	0.022	0.029	0.005	0.019	0.000	0.000	0.057	0.046	0.276
1700	345.	0.157	0.140	0.007	0.020	0.027	0.005	0.000	0.057	29.00	0.056	0.046	0.276
1715	360.	0.153	0.135	0.007	0.020	0.027	0.004	0.019	0.000	0.000	0.056	0.046	0.276

***** NO DATA TAKEN ----- DATA DISCARDED 7 QUESTIONABLE DATA

EC-12 PROPENE
EVACUABLE CHAMBER
1974 FEB 19

AVE SAMPLE TEMP(1) = 85.1
AVE WALL TEMP(1) = 84.8
AVE RADOM = 1.80
AVE RH = 50.5
AVE SOLAR SIMULATOR POWER = 19.1

CLOCK TIME	ELAPSED TIME(MIN)	TS1 (DEG F)	TH1 (DEG F)	REL HUM (%)	SSPOWER (KW)	RADOM (MV)	CO (PPM)	ACETALD (PPM)	PROPALD (PPM)	ACETONE (PPM)
1115	0.	78.8	84.7	51.5	18.55	1.75	1.88	0.001	0.0	0.002
1130	15.	84.7	85.0	51.0	18.95	1.78	1.97	0.001	0.0	0.002
1145	30.	84.7	85.0	51.0	19.25	1.80	1.92	0.001	0.0	0.002
1200	45.	85.7	85.4	50.0	18.80	1.81	1.97	0.020	0.0010	0.006
1215	60.	86.4	86.4	50.0	18.55	1.78	1.97	0.020	0.0010	0.006
1230	75.	86.4	85.7	49.5	18.70	1.74	1.97	0.020	0.0010	0.006
1245	90.	86.4	86.4	49.5	18.75	1.77	2.01	0.020	0.0010	0.006
1300	105.	87.1	87.1	48.5	18.79	1.77	1.97	0.036	0.0010	0.013
1315	120.	87.5	87.5	47.5	18.65	1.73	1.97	0.036	0.0010	0.013
1330	135.	87.5	87.8	47.5	19.39	1.80	1.97	0.036	0.0010	0.013
1345	150.	87.8	87.5	47.0	19.31	1.81	2.01	0.036	0.0010	0.016
1400	165.	88.2	88.5	47.0	19.30	1.80	2.01	0.036	0.0010	0.016
1415	180.	87.8	86.1	46.5	18.89	1.80	2.01	0.036	0.0010	0.016
1430	195.	84.7	81.6	48.5	19.21	1.81	2.01	0.036	0.0010	0.016
1445	210.	84.4	82.6	49.0	19.25	1.82	2.01	0.036	0.0010	0.016
1500	225.	84.7	84.4	51.5	19.25	1.81	2.06	0.036	0.0010	0.022
1515	240.	83.3	80.2	51.5	19.25	1.81	2.06	0.036	0.0010	0.022
1530	255.	83.0	81.6	53.5	19.40	1.81	2.06	0.036	0.0010	0.022
1545	270.	83.7	84.0	53.5	19.30	1.81	2.15	0.036	0.0010	0.022
1600	285.	84.4	84.4	53.5	19.40	1.81	2.15	0.036	0.0010	0.022
1615	300.	84.0	84.7	53.0	19.40	1.81	2.15	0.036	0.0010	0.022
1630	315.	84.0	83.3	53.0	19.40	1.83	2.19	0.036	0.0010	0.022
1645	330.	84.0	82.3	53.0	19.70	1.86	2.19	0.036	0.0010	0.022
1700	345.	84.0	83.7	53.0	18.95	1.79	2.19	0.036	0.0010	0.022
1715	360.	84.4	84.4	53.0	18.95	1.78	2.19	0.036	0.0010	0.022

7 QUESTIONABLE DATA

DATA DISCARDED

NO DATA TAKEN

EC-13 PROPENE
EVACUABLE CHAMBER

1974 FEB 26

1200 0.25 INCH PYREX FILTER

DASTOT READS 0.000 PPM OZONE ON FILTER: MAST SERVICED AND RECALIBRATED

WALL TEMP: TMI SAME AS PREVIOUS WALL T; TM2 BETWEEN PORTS 17 AND 18

SAMPLE TEMP: TSI SAME AS PREVIOUS SAMPLE T (PORT 8): TSI IS IN PORT 1.

32.25 INCH FROM INSULATION SURFACE

ALL TEMP READ IN DEG C ON DORIC MODEL DS-350 THERMOCOUPLE INDICATOR TYPE J

59 CC SAMPLES TAKEN. MAST FACTOR 1.76, CO FACTOR 0.76/17.5, PAN CALIBR. 1

CLOCK TIME	ELAPSED TIME(MIN)	OZONE (PPM)	OXIDANT (PPM)	NO (PPM)	NO2-PAN (PPM)	NO2-PAN (PPM)	PROPENE (PPM)	PAN (PPM)	HCHO (PPM)	HCHO VOL (L)	O3/NO2	TOT N (PPM)	TOT C (PPM)
1200	0-	0.013	0.005	0.504	0.078	0.586	0.508	0.0	0.038	20.00	0.083	0.582	1.572
1215	15-	0.016	0.020	0.324	0.239	0.574	0.426	0.000	0.000	0.000	0.022	0.544	0.000
1230	30-	0.025	0.040	0.194	0.344	0.547	0.368	0.001	0.000	0.000	0.014	0.540	0.000
1245	45-	0.045	0.060	0.116	0.404	0.521	0.322	0.000	0.000	0.000	0.013	0.524	0.000
1300	60-	0.069	0.085	0.066	0.425	0.497	0.282	0.007	0.235	30.00	0.011	0.498	1.574
1315	75-	0.101	0.125	0.043	0.418	0.463	0.250	0.000	0.000	0.000	0.010	0.474	0.000
1330	90-	0.138	0.170	0.028	0.402	0.432	0.220	0.018	0.000	0.000	0.010	0.448	0.000
1345	105-	0.174	0.205	0.024	0.375	0.399	0.188	0.000	0.000	0.000	0.011	0.422	0.000
1400	120-	0.205	0.240	0.022	0.349	0.370	0.160	0.029	0.295	30.00	0.013	0.400	1.545
1415	135-	0.233	0.280	0.018	0.318	0.332	0.134	0.000	0.000	0.000	0.013	0.377	0.000
1430	150-	0.256	0.310	0.016	0.285	0.300	0.116	0.053	0.000	0.000	0.014	0.353	0.000
1445	165-	0.277	0.330	0.014	0.252	0.265	0.090	0.000	0.000	0.000	0.016	0.329	0.000
1500	180-	0.295	0.350	0.012	0.226	0.238	0.070	0.073	0.322	30.00	0.016	0.311	1.428
1515	195-	0.314	0.375	0.011	0.199	0.207	0.063	0.000	0.000	0.000	0.017	0.293	0.000
1530	210-	0.331	0.390	0.012	0.171	0.183	0.054	0.093	0.000	0.000	0.023	0.276	0.000
1545	225-	0.349	0.405	0.012	0.145	0.157	0.040	0.000	0.000	0.000	0.029	0.259	0.000
1600	240-	0.356	0.420	0.011	0.123	0.134	0.039	0.111	0.304	29.00	0.031	0.245	1.617
1615	255-	0.360	0.430	0.010	0.111	0.118	0.032	0.000	0.000	0.000	0.031	0.235	0.000
1630	270-	0.367	0.425	0.011	0.097	0.106	0.026	0.118	0.000	0.000	0.041	0.226	0.000
1645	285-	0.366	0.423	0.011	0.084	0.094	0.022	0.000	0.000	0.000	0.047	0.217	0.000
1700	300-	0.367	0.430	0.010	0.078	0.086	0.018	0.126	0.295	35.00	0.045	0.214	1.456
1715	315-	0.365	0.415	0.010	0.069	0.079	0.016	0.000	0.000	0.000	0.051	0.204	0.000
1730	330-	0.362	0.420	0.007	0.067	0.074	0.013	0.124	0.000	0.000	0.039	0.196	0.000
1745	345-	0.360	0.410	0.011	0.061	0.070	0.011	0.000	0.256	31.00	0.044	0.193	0.000
1800	360-	0.354	0.410	0.008	0.063	0.070	0.009	0.119	0.000	0.000	0.047	0.191	1.334

----- NO DATA TAKEN ----- DATA DISCARDED 7 QUESTIONABLE DATA

EC-13 PROPENE
EVACUABLE CHAMBER
1974 FEB 26

AVE SAMPLE TEMP(1) = 84.5
AVE SAMPLE TEMP(2) = 84.8
AVE WALL TEMP(1) = 84.6
AVE WALL TEMP(2) = 82.0
AVE RADOM = 1.80
AVE PH = 45.0
AVE SOLAR SIMULATOR POWER = 19.1

CLOCK TIME	ELAPSED TIME (MIN)	TS1 (DEG F)	TS2 (DEG F)	TW1 (DEG F)	TW2 (DEG F)	REL HUM (%)	SSPOWER (KW)	RADIOM (MV)	CO (PPM)	ACETALD (PPM)	PROPALD (PPM)	ACETONE (PPM)
1200	0.	80.1	79.9	81.5	81.4	47.0	19.10	1.79	2.00	0.005	0.0	0.008
1215	15.	82.4	81.5	83.7	81.9	47.5	19.30	1.77	2.04	0.005	0.0	0.008
1230	30.	83.2	82.6	83.2	82.3	47.0	19.30	1.81	2.00	0.005	0.0	0.008
1245	45.	83.3	82.8	82.8	82.1	46.0	18.95	1.80	2.04	0.005	0.0	0.008
1300	60.	83.3	83.1	82.8	82.3	45.5	18.70	1.76	2.08	0.211	0.0010	0.018
1315	75.	84.6	84.2	86.2	82.8	45.5	18.50	1.77	2.08	0.005	0.0	0.008
1330	90.	85.3	85.0	86.2	83.2	44.5	18.49	1.75	2.08	0.005	0.0	0.008
1345	105.	85.7	85.5	86.2	83.5	44.0	19.20	1.82	2.13	0.264	0.0010	0.060
1400	120.	86.2	86.2	86.8	84.1	43.0	19.70	1.86	2.17	0.005	0.0	0.008
1415	135.	87.1	86.8	88.7	84.6	42.5	19.20	1.83	2.17	0.005	0.0	0.008
1430	150.	85.3	85.7	81.9	83.9	42.0	19.40	1.82	2.26	0.005	0.0	0.008
1445	165.	85.0	85.7	83.9	84.1	43.0	19.29	1.80	2.26	0.005	0.0	0.008
1500	180.	85.5	86.0	85.1	84.1	43.5	18.90	1.79	2.30	0.234	0.0030	0.091
1515	195.	85.7	86.0	85.9	83.9	44.0	19.31	1.79	2.34	0.005	0.0	0.008
1530	210.	85.9	86.6	86.6	84.1	44.0	19.25	1.80	2.26	0.005	0.0	0.008
1545	225.	85.3	85.9	82.8	83.0	43.5	19.15	1.79	2.34	0.005	0.0	0.008
1600	240.	83.2	84.2	80.8	81.9	43.5	19.50	1.84	2.34	0.237	0.0010	0.166
1615	255.	82.4	84.2	82.4	81.9	42.0	19.00	1.77	2.47	0.005	0.0	0.008
1630	270.	83.3	84.4	83.5	81.7	47.5	19.00	1.77	2.47	0.005	0.0	0.008
1645	285.	83.9	84.6	84.6	81.7	47.5	19.00	1.80	2.47	0.005	0.0	0.008
1700	300.	84.4	85.1	85.1	82.3	47.0	19.25	1.81	2.47	0.240	0.0030	0.120
1715	315.	84.6	85.5	85.7	82.3	46.5	19.00	1.80	2.47	0.005	0.0	0.008
1730	330.	85.0	85.7	86.0	82.4	46.0	19.29	1.84	2.47	0.005	0.0	0.008
1745	345.	85.3	85.9	86.4	82.6	45.5	19.11	1.79	2.56	0.005	0.0	0.008
1800	360.	85.7	86.4	87.1	83.2	44.5	19.10	1.79	2.56	0.214	0.0010	0.128

----- NO DATA TAKEN

----- DATA DISCARDED

----- QUESTIONABLE DATA

EC-14 PROPENE
EVACUABLE CHAMBER
1974 FEB 27

SIMULATOR ON 1115 0.25 INCH PYREX FILTER
59 GC SAMPLES TAKEN, MAST FACTOR 1.76, CD FACTOR 0.76/16, PAN CALIBR. 1

CLOCK TIME	ELAPSED TIME(MIN)	OZONE (PPH)	OXIDANT (PPH)	NO (PPH)	NO2-PAN (PPH)	NO2-PAN (PPH)	PROPENE (PPH)	PAN (PPH)	HCHO (PPH)	HCHO VOL (L)	034NO /NO2	TOT N (PPH)	TOT C (PPHC)
1115	0.	0.0	0.010	0.104	0.012	0.118	0.504	0.0	0.008	15.00	0.0	0.116	1.539
1130	15.	0.003	0.025	0.050	0.063	0.115	0.472	0.001	0.008	0.000	0.003	0.114	0.000
1145	30.	0.038	0.070	0.017	0.090	0.112	0.426	0.001	0.008	0.000	0.007	0.108	0.000
1200	45.	0.102	0.140	0.012	0.085	0.097	0.380	0.006	0.008	0.000	0.014	0.101	0.000
1215	60.	0.145	0.195	0.011	0.075	0.086	0.334	0.006	0.150	30.00	0.021	0.092	1.584
1230	75.	0.164	0.220	0.011	0.066	0.074	0.294	0.006	0.008	0.000	0.037	0.088	0.000
1245	90.	0.178	0.230	0.010	0.057	0.067	0.254	0.015	0.008	0.000	0.030	0.082	0.000
1300	105.	0.185	0.240	0.011	0.051	0.062	0.232	0.008	0.008	0.000	0.039	0.079	0.000
1315	120.	0.183	0.235	0.011	0.047	0.057	0.206	0.020	0.164	30.00	0.042	0.078	1.437
1330	135.	0.178	0.230	0.011	0.043	0.053	0.190	0.008	0.008	0.000	0.047	0.073	0.000
1345	150.	0.170	0.225	0.011	0.039	0.050	0.170	0.023	0.008	0.000	0.042	0.071	0.000
1400	165.	0.163	0.215	0.010	0.037	0.048	0.152	0.008	0.008	0.000	0.043	0.071	1.340
1415	180.	0.158	0.205	0.011	0.035	0.044	0.140	0.025	0.244	29.00	0.042	0.068	0.000
1430	195.	0.150	0.195	0.010	0.034	0.044	0.136	0.008	0.008	0.000	0.042	0.067	0.000
1445	210.	0.144	0.190	0.010	0.033	0.043	0.122	0.024	0.008	0.000	0.042	0.067	0.000
1500	225.	0.142	0.185	0.010	0.033	0.042	0.114	0.008	0.008	0.000	0.042	0.066	0.000
1515	240.	0.138	0.190	0.010	0.032	0.041	0.102	0.023	0.256	30.00	0.042	0.065	1.255
1530	255.	0.133	0.170	0.010	0.032	0.042	0.109	0.008	0.008	0.000	0.040	0.064	0.000
1545	270.	0.128	0.170	0.010	0.033	0.043	0.097	0.021	0.008	0.000	0.037	0.064	0.000
1600	285.	0.126	0.170	0.010	0.032	0.041	0.087	0.008	0.008	0.000	0.038	0.062	0.000
1615	300.	0.124	0.165	0.010	0.032	0.040	0.075	0.022	0.246	36.00	0.037	0.064	1.062
1630	315.	0.122	0.160	0.011	0.030	0.041	0.083	0.008	0.008	0.000	0.044	0.061	0.000
1645	330.	0.120	0.155	0.010	0.031	0.040	0.078	0.020	0.008	0.000	0.037	0.060	0.000
1700	345.	0.118	0.150	0.010	0.031	0.040	0.070	0.008	0.242	32.00	0.037	0.060	0.000
1715	360.	0.118	0.150	0.010	0.029	0.038	0.066	0.020	0.008	0.000	0.039	0.059	0.000

----- NO DATA TAKEN ----- DATA DISCARDED ----- QUESTIONABLE DATA

EC-14 PROPENE
EVACUABLE CHAMBER
1974 FEB 27

AVE SAMPLE TEMP(1) = 85.3
AVE SAMPLE TEMP(2) = 85.7
AVE WALL TEMP(1) = 84.8
AVE WALL TEMP(2) = 84.0
AVE RADION = 1.80
AVE FH = 55.5
AVE SOLAR SIMULATOR POWER = 19.0

CLOCK TIME	ELAPSED TIME(MIN)	TS1 (DEG F)	TS2 (DEG F)	TW1 (DEG F)	TW2 (DEG F)	REL HUM (%)	SSPOWER (KW)	RADION (NV)	CO (PPM)	ACETALD (PPM)	PROPALD (PPM)	ACETONE (PPM)
1115	0.	---	83.5	85.7	84.6	54.5	19.21	1.79	2.09	0.002	0.0010	0.004
1130	15.	85.0	84.6	85.3	84.8	54.0	19.39	1.85	2.04	-----	-----	-----
1145	30.	85.9	85.3	86.0	85.1	54.0	18.70	1.83	-----	-----	-----	-----
1200	45.	86.4	85.9	86.6	85.3	53.5	18.80	1.78	2.11	-----	-----	-----
1215	60.	86.6	86.2	86.8	85.3	53.0	18.70	1.80	-----	-----	-----	-----
1230	75.	86.9	86.9	86.9	85.7	52.5	18.55	1.80	-----	0.146	0.0010	0.042
1245	90.	87.5	87.5	88.0	86.0	52.0	18.55	1.77	2.18	-----	-----	-----
1300	105.	85.5	86.0	82.6	84.6	-----	18.21	1.76	2.18	-----	-----	-----
1315	120.	84.6	85.7	83.0	84.4	54.0	18.80	1.77	2.23	-----	-----	-----
1330	135.	84.8	85.7	82.8	84.2	-----	19.00	1.75	-----	0.212	0.0020	0.062
1345	150.	85.1	85.9	84.4	84.2	56.0	19.09	1.81	2.28	-----	-----	-----
1400	165.	85.3	85.9	83.7	83.9	56.0	19.09	1.75	2.28	-----	-----	-----
1415	180.	85.3	85.5	83.3	83.5	56.5	19.19	1.83	2.23	0.240	0.0020	0.053
1430	195.	85.1	85.9	84.8	83.7	56.5	19.00	1.76	2.28	-----	-----	-----
1445	210.	85.3	86.0	85.3	83.7	56.5	19.40	1.84	2.28	-----	-----	-----
1500	225.	84.4	85.3	82.1	83.0	56.5	19.00	1.82	2.28	-----	-----	-----
1515	240.	84.6	85.3	83.5	83.0	56.5	19.20	1.78	-----	0.230	0.0020	0.060
1530	255.	85.0	85.9	85.0	83.3	56.5	19.10	1.80	-----	-----	-----	-----
1545	270.	85.3	86.0	85.5	83.3	56.5	18.95	1.85	-----	-----	-----	-----
1600	285.	85.5	86.2	86.0	83.3	56.0	19.10	1.82	-----	-----	-----	-----
1615	300.	84.1	85.3	81.7	82.4	56.0	19.18	1.82	2.42	0.211	0.0020	0.040
1630	315.	84.2	85.3	83.5	82.6	56.0	19.30	1.78	-----	-----	-----	-----
1645	330.	84.8	85.7	84.6	82.8	54.5	19.30	1.77	2.47	-----	-----	-----
1700	345.	85.1	85.9	85.5	83.0	56.0	19.60	1.77	2.52	-----	-----	-----
1715	360.	85.3	86.0	86.0	83.0	55.5	19.08	1.87	2.52	0.221	-----	0.058

----- NO DATA TAKEN ----- DATA DISCARDED ----- QUESTIONABLE DATA

EC-16 PROPENE
EVACUABLE CHAMBER
1974 MAR 6

STIMULATOR ON 1115 0.25 INCH PYREX FILTER
TECO AND BENDIX USED TO MONITOR NOX, DATA ARE FROM TECO
TECO SAMPLING RATE 986 CC/MIN
59 GC SAMPLES TAKEN, MAST FACTOR 1.76, CO FACTOR 0.76/14, PAN CALIBR. 3

CLOCK TIME	ELAPSED TIME (MIN)	OZONE (PPH)	OXIDANT (PPH)	NO (PPH)	NO2-PAN (PPH)	NOX-PAN (PPH)	PROPENE (PPH)	PAN (PPH)	HCHO (PPH)	HCMD VOL (L)	03-NO /NO2	TOT N (PPH)	TOT C (PPH)
1115	0	0.0	0.010	1.122	0.156	1.260	1.036	0.0	0.015	21.00	0.0	1.278	3.164
1130	15	0.0	0.025	0.960	0.298	1.248	0.984	0.001	0.001	0.001	0.0	1.259	0.000
1145	30	0.0	0.045	0.768	0.479	1.235	0.904	0.001	0.001	0.001	0.0	1.248	0.000
1200	45	0.0	0.060	0.624	0.506	1.210	0.844	0.001	0.001	0.001	0.0	1.212	0.000
1215	60	0.001	0.085	0.478	0.717	1.193	0.780	0.004	0.247	30.00	0.001	1.159	3.254
1230	75	0.006	0.100	0.342	0.818	1.148	0.704	0.001	0.001	0.001	0.002	1.170	0.000
1245	90	0.020	0.125	0.204	0.896	1.106	0.640	0.016	0.001	0.001	0.005	1.116	0.000
1300	105	0.050	0.170	0.132	0.946	1.066	0.554	0.001	0.001	0.001	0.007	1.104	0.000
1315	120	0.087	0.220	0.072	0.936	0.996	0.510	0.036	0.431	29.00	0.007	1.044	3.098
1330	135	0.140	0.270	0.048	0.897	0.940	0.438	0.001	0.001	0.001	0.006	0.928	0.000
1345	150	0.201	0.340	0.025	0.834	0.868	0.380	0.068	0.001	0.001	0.008	0.870	0.000
1400	165	0.248	0.395	0.024	0.758	0.782	0.312	0.001	0.001	0.001	0.010	0.815	2.669
1415	180	0.290	0.425	0.023	0.685	0.709	0.260	0.107	0.555	31.00	0.011	0.761	0.000
1430	195	0.329	0.475	0.020	0.619	0.631	0.218	0.001	0.001	0.001	0.012	0.656	0.000
1445	210	0.356	0.505	0.018	0.542	0.560	0.176	0.136	0.001	0.001	0.013	0.655	0.000
1500	225	0.388	0.530	0.017	0.486	0.494	0.134	0.001	0.001	0.001	0.016	0.600	2.317
1515	240	0.409	0.555	0.016	0.409	0.425	0.112	0.175	0.592	30.00	0.016	0.553	0.000
1530	255	0.428	0.575	0.013	0.363	0.375	0.088	0.001	0.001	0.001	0.016	0.523	0.000
1545	270	0.443	0.590	0.013	0.331	0.349	0.085	0.179	0.001	0.001	0.016	0.490	0.000
1600	285	0.457	0.595	0.010	0.267	0.285	0.068	0.001	0.001	0.001	0.019	0.444	2.435
1615	300	0.467	0.605	0.008	0.209	0.221	0.056	0.001	0.001	0.001	0.020	0.431	0.000
1630	315	0.478	0.610	0.008	0.198	0.206	0.043	0.001	0.001	0.001	0.019	0.436	0.000
1645	330	0.474	0.605	0.006	0.187	0.191	0.038	0.001	0.001	0.001	0.019	0.436	0.000
1700	345	0.473	0.605	0.010	0.150	0.163	0.030	0.001	0.001	0.001	0.035	0.418	2.362
1715	360	0.468	0.600	0.010	0.129	0.135	0.024	0.279	0.001	0.001			

----- NO DATA TAKEN ----- DATA DISCARDED ----- QUESTIONABLE DATA

EC-16 PROPENE
EVACUABLE CHAMBER
1974 MAR 6

AVE SAMPLE TEMP(1) = 84.6
AVE SAMPLE TEMP(2) = 85.1
AVE WALL TEMP(1) = 83.9
AVE WALL TEMP(2) = 83.3
AVE RATION = 1.81
AVE RH = 54.5
AVE SOLAR SIMULATOR POWER = 19.6

CLOCK TIME	ELAPSED TIME(MIN)	TS1 (DEG F)	TS2 (DEG F)	TW1 (DEG F)	TW2 (DEG F)	REL HUM (%)	SSPOWER (KW)	RADICH (MW)	CO (PPM)	ACETALD (PPM)	PROPALD (PPM)	ACETONE (PPM)
1115	0.	85.3	84.8	86.6	85.9	50.0	19.31	1.80	2.17	0.007	0.0010	0.008
1130	15.	84.4	84.4	81.0	84.8	50.0	19.55	1.81	2.17	0.007	0.0010	0.008
1145	30.	83.3	83.3	81.2	83.7	53.0	19.45	1.81	2.23	0.007	0.0010	0.008
1200	45.	83.5	84.2	82.4	84.1	54.0	19.41	1.79	2.23	0.007	0.0010	0.008
1215	60.	83.9	84.2	83.0	83.7	55.0	19.70	1.81	2.28	0.007	0.0030	0.018
1230	75.	84.1	84.6	83.2	83.3	55.0	19.50	1.81	2.39	0.007	0.0010	0.008
1245	90.	84.4	84.8	83.7	83.3	55.0	19.45	1.77	2.39	0.007	0.0010	0.008
1300	105.	85.3	85.7	84.6	83.5	55.0	19.45	1.78	2.33	0.007	0.0010	0.008
1315	120.	85.3	85.7	85.0	83.5	55.0	19.60	1.82	2.50	0.007	0.0050	0.034
1330	135.	85.7	85.9	85.7	83.5	54.5	19.70	1.82	2.50	0.007	0.0010	0.008
1345	150.	85.3	85.9	83.7	83.2	54.5	19.00	1.80	2.55	0.007	0.0010	0.008
1400	165.	84.2	84.8	82.6	82.8	54.5	19.65	1.81	2.55	0.007	0.0010	0.008
1415	180.	84.6	85.1	84.2	83.2	55.0	19.70	1.82	2.66	0.007	0.0050	0.059
1430	195.	85.0	85.1	85.0	84.2	55.0	20.00	1.82	2.66	0.007	0.0010	0.008
1445	210.	85.5	86.2	85.9	83.5	55.0	19.72	1.82	2.77	0.007	0.0010	0.008
1500	225.	84.8	85.5	81.7	82.8	54.5	19.70	1.79	2.77	0.007	0.0010	0.008
1515	240.	84.2	85.0	83.0	82.6	55.0	19.85	1.81	2.88	0.007	0.0050	0.085
1530	255.	84.4	85.3	84.2	82.8	55.0	19.85	1.81	3.10	0.007	0.0010	0.008
1545	270.	84.8	85.5	84.8	82.8	55.0	19.75	1.81	3.10	0.007	0.0010	0.008
1600	285.	85.3	85.3	85.7	83.0	55.0	19.60	1.80	3.10	0.007	0.0010	0.008
1615	300.	85.5	86.2	86.2	83.2	55.0	19.41	1.80	3.15	0.007	0.0060	0.096
1630	315.	83.9	84.8	81.2	82.1	54.5	19.70	1.79	3.23	0.007	0.0010	0.008
1645	330.	84.4	85.1	83.7	82.8	55.0	19.81	1.81	3.23	0.007	0.0010	0.008
1700	345.	84.4	85.1	84.4	82.4	55.0	20.01	1.81	3.427	0.007	0.0090	0.094
1715	360.	84.8	85.5	85.1	82.6	55.0	20.09	1.84	3.427	0.007	0.0090	0.094

7 QUESTIONABLE DATA

DATA DISCARDED

NO DATA TAKEN

EC-17 PROPENE
EVACUABLE CHAMBER
1974 MAR 7

SIMULATOR ON 1045 0.25 INCH PYREX FILTER
TECO AND BENDIX USED TO MONITOR NOX, DATA ARE FROM TECO, BENDIX OFF
CHAMBER AT 1430
57 GC SAMPLES TAKEN, MAST FACTOR 1.76, CD FACTOR 0.76/14, PAN CALIBR. 3

CLOCK TIME	ELAPSED TIME(MIN)	OZONE (PPM)	OXIDANT (PPM)	NO (PPM)	NO2-PAN (PPM)	NOX-PAN (PPM)	PROPENE (PPM)	PAN (PPM)	HCHO (PPM)	HCHO VOL (L)	O3*NO /NO2	TOT N (PPM)	TOT C (PPMC)
1045	0.	0.0	0.0	0.106	0.014	0.120	0.103	0.0	0.0	30.00	0.0	0.120	0.328
1100	15.	0.001	0.0	0.077	0.042	0.120	0.093	0.000	0.001	0.119	0.001	0.119	0.328
1115	30.	0.006	0.005	0.055	0.061	0.119	0.083	0.0	0.006	0.116	0.006	0.116	0.328
1130	45.	0.014	0.013	0.037	0.076	0.115	0.070	0.000	0.007	0.114	0.007	0.114	0.328
1145	60.	0.023	0.030	0.026	0.085	0.111	0.064	0.002	0.027	31.00	0.008	0.113	0.351
1200	75.	0.039	0.045	0.020	0.084	0.103	0.058	0.000	0.010	0.108	0.010	0.108	0.351
1215	90.	0.051	0.055	0.017	0.081	0.098	0.048	0.005	0.011	0.103	0.011	0.103	0.351
1230	105.	0.042	0.070	0.014	0.078	0.093	0.043	0.000	0.013	0.100	0.013	0.100	0.351
1245	120.	0.071	0.080	0.013	0.075	0.087	0.038	0.000	0.014	0.091	0.014	0.091	0.351
1300	135.	0.081	0.085	0.012	0.068	0.081	0.033	0.011	0.017	0.089	0.017	0.089	0.351
1315	150.	0.089	0.095	0.012	0.064	0.076	0.028	0.000	0.019	0.086	0.019	0.086	0.351
1330	165.	0.097	0.105	0.012	0.060	0.072	0.024	0.000	0.022	0.086	0.022	0.086	0.351
1345	180.	0.105	0.115	0.012	0.058	0.069	0.021	0.000	0.024	0.080	0.024	0.080	0.351
1400	195.	0.113	0.125	0.011	0.052	0.062	0.018	0.000	0.025	0.079	0.025	0.079	0.351
1415	210.	0.116	0.130	0.010	0.050	0.060	0.015	0.020	0.026	0.074	0.026	0.074	0.351
1430	225.	0.119	0.130	0.010	0.046	0.056	0.013	0.000	0.027	0.071	0.027	0.071	0.351
1445	240.	0.124	0.135	0.010	0.043	0.052	0.011	0.022	0.027	0.068	0.027	0.068	0.351
1500	255.	0.127	0.150	0.008	0.041	0.049	0.010	0.000	0.027	0.066	0.027	0.066	0.351
1515	270.	0.133	0.150	0.010	0.035	0.043	0.008	0.026	0.027	0.064	0.027	0.064	0.351
1530	285.	0.135	0.155	0.008	0.033	0.040	0.007	0.000	0.027	0.064	0.027	0.064	0.351
1545	300.	0.136	0.150	0.008	0.033	0.040	0.005	0.000	0.027	0.064	0.027	0.064	0.351
1600	315.	0.137	0.070	0.008	0.030	0.040	0.005	0.000	0.027	0.064	0.027	0.064	0.351
1615	330.	0.137	0.150	0.007	0.029	0.037	0.005	0.027	0.027	0.064	0.027	0.064	0.351
1630	345.	0.138	0.150	0.008	0.028	0.036	0.003	0.000	0.027	0.064	0.027	0.064	0.351
1645	360.	0.139	0.155	0.008	0.028	0.037	0.003	0.027	0.027	0.064	0.027	0.064	0.351

----- NO DATA TAKEN ----- DATA DISCARDED 7 QUESTIONABLE DATA

EC-17 PROPENE
EVACUABLE CHAMBER
1974 MAR 7

AVE SAMPLE TEMP(1) = 83.8
AVE SAMPLE TEMP(2) = 84.2
AVE WALL TEMP(1) = 83.0
AVE WALL TEMP(2) = 82.6
AVE RADION = 1.80
AVE RH = 56.5
AVE SOLAR SIMULATOR POWER = 19.5

CLOCK TIME	ELAPSED TIME(MIN)	TS1 (DEG F)	TS2 (DEG F)	TW1 (DEG F)	TW2 (DEG F)	REL HUM (%)	SSPWER (KW)	RADICH (MV)	CO (PPM)	ACETALD (PPM)	PROPALD (PPM)	ACETONE (PPM)
1045	0.	84.8	84.1	86.8	85.7	51.5	19.29	1.73	2.17	0.002	0.0010	0.004
1100	15.	83.9	83.5	81.2	85.1	51.5	19.30	1.77	2.17	0.000	0.000	0.000
1115	30.	83.7	83.9	82.8	85.0	51.5	19.29	1.78	2.12	0.000	0.000	0.000
1130	45.	84.2	84.4	85.1	84.8	51.5	19.30	1.79	2.17	0.000	0.000	0.000
1145	60.	84.2	84.6	82.1	84.2	55.5	0.000	1.81	2.12	0.040	0.0010	0.015
1200	75.	83.5	83.9	80.1	83.2	55.5	19.35	1.80	2.23	0.000	0.000	0.000
1215	90.	83.7	84.4	82.3	83.5	0.000	19.40	1.79	0.000	0.000	0.000	0.000
1230	105.	83.9	84.6	83.2	83.3	56.5	19.55	1.80	0.000	0.000	0.000	0.000
1245	120.	84.4	85.1	83.9	83.3	57.0	19.60	1.77	2.23	0.054	0.0010	0.029
1300	135.	84.6	85.3	84.4	83.2	0.000	19.45	1.82	0.000	0.000	0.000	0.000
1315	150.	85.0	85.5	85.0	83.2	56.5	19.50	1.79	2.23	0.000	0.000	0.000
1330	165.	85.3	85.9	85.3	83.2	0.000	19.50	1.80	0.000	0.000	0.000	0.000
1345	180.	83.0	83.7	79.2	81.4	56.5	19.40	1.77	2.23	0.052	0.0020	0.030
1400	195.	82.8	83.9	81.0	81.7	58.0	19.55	1.80	2.23	0.000	0.000	0.000
1415	210.	82.8	83.5	82.1	81.4	58.5	19.55	1.80	2.33	0.000	0.000	0.000
1430	225.	83.3	84.1	83.2	81.5	59.0	19.65	1.79	2.28	0.000	0.000	0.000
1445	240.	83.5	84.4	84.2	81.7	58.5	0.000	1.80	2.39	0.054	0.0020	0.044
1500	255.	84.1	84.8	84.6	81.7	58.5	19.50	1.80	2.28	0.000	0.000	0.000
1515	270.	84.1	84.6	82.8	81.4	58.0	19.80	1.79	2.36	0.000	0.000	0.000
1530	285.	82.8	80.6	81.5	81.2	58.0	19.80	1.80	2.33	0.000	0.000	0.000
1545	300.	83.0	81.9	82.6	81.0	58.5	19.50	1.78	0.000	0.040	0.0020	0.040
1600	315.	83.3	84.1	83.5	81.4	58.0	19.75	1.82	2.39	0.000	0.000	0.000
1615	330.	83.7	84.4	84.2	81.4	58.0	19.60	1.82	2.39	0.000	0.000	0.000
1630	345.	84.2	84.8	0.000	81.7	57.5	19.80	1.83	2.39	0.000	0.000	0.000
1645	360.	82.6	83.9	80.1	81.0	57.5	19.60	1.80	2.44	0.038	0.0010	0.042

***** NO DATA TAKEN ----- DATA DISCARDED 7 QUESTIONABLE DATA

EC-10 PROPENE
EVACUABLE CHAMBER
1974 MAR 3

SIMULATOR ON 1030 0.25 INCH PYREX FILTER
59 GC SAMPLES TAKEN, NAST FACTOR 1.76, CD FACTOR 0.76/13.5, PAN CALIBR. 3

CLOCK TIME	ELAPSED TIME(MIN)	OZONE (PPH)	OXIDANT (PPH)	NO (PPH)	NO2-PAN (PPH)	NO2-PAN (PPH)	PROPENE (PPH)	PAN (PPH)	HCHO (PPH)	HCHO VOL (L)	03940 /NO2	TOT N (PPH)	TOT C (PPH)
1030	0	0.0	0.0	0.104	0.014	0.014	0.072	0.0	0.0	30.00	0.0	0.120	2.928
1045	15	0.014	0.030	0.030	0.085	0.114	0.920	0.000	0.000	0.000	0.000	0.114	0.000
1100	30	0.084	0.115	0.012	0.094	0.104	0.840	0.003	0.000	0.000	0.011	0.101	0.000
1115	45	0.146	0.185	0.008	0.083	0.093	0.748	0.000	0.000	0.000	0.015	0.101	0.000
1130	60	0.170	0.215	0.008	0.073	0.081	0.696	0.015	0.196	25.00	0.020	0.056	2.932
1145	75	0.185	0.225	0.007	0.061	0.048	0.616	0.000	0.000	0.000	0.022	0.089	0.000
1200	90	0.189	0.235	0.007	0.052	0.059	0.560	0.027	0.000	0.000	0.028	0.085	0.000
1215	105	0.183	0.225	0.007	0.047	0.054	0.480	0.000	0.000	0.000	0.028	0.085	0.000
1230	120	0.175	0.210	0.007	0.042	0.045	0.440	0.035	0.321	31.00	0.030	0.084	2.830
1245	135	0.166	0.200	0.007	0.038	0.044	0.412	0.000	0.000	0.000	0.031	0.082	0.000
1300	150	0.156	0.185	0.007	0.036	0.043	0.378	0.038	0.000	0.000	0.030	0.082	0.000
1315	165	0.145	0.170	0.007	0.036	0.043	0.352	0.000	0.000	0.000	0.029	0.082	0.000
1330	180	0.135	0.160	0.007	0.035	0.042	0.337	0.039	0.352	31.00	0.028	0.082	2.791
1345	195	0.128	0.150	0.007	0.035	0.042	0.302	0.000	0.000	0.000	0.026	0.082	0.000
1400	210	0.122	0.140	0.007	0.034	0.043	0.284	0.039	0.000	0.000	0.026	0.080	0.000
1415	225	0.118	0.130	0.007	0.033	0.040	0.264	0.000	0.000	0.000	0.026	0.079	0.000
1430	240	0.113	0.125	0.007	0.033	0.041	0.260	0.039	0.392	30.00	0.026	0.079	0.000
1445	255	0.110	0.120	0.007	0.033	0.040	0.242	0.000	0.000	0.000	0.024	0.079	0.000
1500	270	0.107	0.125	0.007	0.033	0.040	0.238	0.039	0.000	0.000	0.024	0.079	0.000
1515	285	0.106	0.130	0.007	0.033	0.039	0.220	0.000	0.000	0.000	0.023	0.079	0.000
1530	300	0.106	0.130	0.007	0.034	0.040	0.206	0.038	0.403	28.00	0.023	0.079	0.000
1545	315	0.105	0.125	0.007	0.034	0.039	0.202	0.000	0.000	0.000	0.022	0.079	0.000
1600	330	0.104	0.125	0.007	0.034	0.039	0.192	0.038	0.000	0.000	0.022	0.079	0.000
1615	345	0.106	0.125	0.007	0.034	0.040	0.172	0.000	0.368	35.00	0.023	0.079	0.000
1630	360	0.106	0.125	0.007	0.032	0.039	0.168	0.038	0.000	0.000	0.024	0.077	2.608

***** NO DATA TAKEN ***** DATA DISCARDED ***** QUESTIONABLE DATA

EC-18 PROPENE
EVACUABLE CHAMBER
1974 MAR 8

AVE SAMPLE TEMP(1) = 84.0
AVE SAMPLE TEMP(2) = 84.4
AVE WALL TEMP(1) = 83.7
AVE WALL TEMP(2) = 82.6
AVE RADION = 1.79
AVE RH = 54.5
AVE SOLAR SIMULATOR POWER = 19.6

CLOCK TIME	ELAPSED TIME (MIN)	TS1 (DEG F)	TS2 (DEG F)	TW1 (DEG F)	TW2 (DEG F)	REL HUM (%)	SSPOWER (KW)	RADION (MV)	CO (PPM)	ACETALD (PPM)	PROPALD (PPM)	ACETONE (PPM)
1030	0.	83.7	83.2	83.1	84.6	50.5	19.70	1.80	2.31	0.003	0.0010	0.001
1045	15.	83.0	83.0	80.6	84.2	50.5	19.41	1.79	2.36	0.003	0.0010	0.001
1100	30.	82.4	82.6	80.3	83.5	53.0	19.41	1.79	0.003	0.003	0.0010	0.001
1115	45.	82.8	83.0	81.5	83.3	54.5	19.30	1.76	2.31	0.003	0.0010	0.001
1130	60.	83.2	83.5	82.1	83.2	55.5	19.41	1.81	2.36	0.003	0.0020	0.042
1145	75.	83.5	83.9	82.8	83.2	55.5	19.30	1.80	2.42	0.003	0.0010	0.001
1200	90.	83.9	84.2	83.2	82.8	55.5	19.90	1.80	2.48	0.003	0.0010	0.001
1215	105.	84.1	84.4	83.5	82.8	55.5	19.50	1.80	2.42	0.003	0.0020	0.001
1230	120.	84.4	84.8	84.2	83.0	55.5	19.50	1.80	2.42	0.003	0.0020	0.001
1245	135.	85.0	85.1	84.8	83.0	55.5	19.48	1.77	0.003	0.003	0.0020	0.001
1300	150.	85.2	85.9	85.3	81.9	55.5	19.35	1.77	2.59	0.003	0.0010	0.001
1315	165.	83.3	84.1	82.3	82.1	56.0	19.35	1.78	0.003	0.003	0.0020	0.001
1330	180.	84.1	84.6	83.5	82.3	56.0	19.50	1.80	2.70	0.003	0.0020	0.001
1345	195.	84.2	85.0	84.6	82.4	56.0	19.50	1.80	2.70	0.003	0.0020	0.001
1400	210.	83.0	83.7	80.6	81.5	56.5	19.50	1.80	2.70	0.003	0.0020	0.001
1415	225.	83.2	83.5	82.1	81.4	56.5	19.50	1.80	2.70	0.003	0.0020	0.001
1430	240.	83.5	84.1	83.3	81.7	56.5	19.40	1.75	2.65	0.003	0.0020	0.001
1445	255.	83.7	84.4	84.2	81.5	56.5	19.40	1.78	2.76	0.003	0.0020	0.001
1500	270.	84.1	84.4	84.6	81.7	56.5	19.50	1.77	2.76	0.003	0.0020	0.001
1515	285.	84.4	84.8	85.3	81.9	56.0	19.65	1.80	2.87	0.003	0.0020	0.001
1530	300.	84.6	85.1	85.5	82.1	55.0	19.50	1.81	2.76	0.003	0.0020	0.001
1545	315.	85.1	85.7	86.2	82.4	55.0	19.45	1.82	2.87	0.003	0.0020	0.001
1600	330.	85.5	85.9	86.6	82.6	55.0	20.21	1.78	2.98	0.003	0.0020	0.001
1615	345.	85.9	86.2	87.1	83.0	53.5	20.00	1.79	3.01	0.003	0.0020	0.001
1630	360.	86.0	86.4	87.1	83.0	53.0	20.20	1.80	0.003	0.003	0.0020	0.042

----- NC DATA TAKEN ----- DATA DISCARDED ? QUESTIONABLE DATA

EC-21 PROPENE
EVACUABLE CHAMBER
1974 MAR 13

SIMULATOR ON 1100 0.25 INCH PYREX FILTER
ALL TEMP READ IN VOLTS ON SYSTRON-OCNNER DVM
59 GC SAMPLES TAKEN, MAST FACTOR 1.76, CO FACTOR 0.76/15, PAN CALIBR. 3

CLOCK TIME	ELAPSED TIME(MIN)	OZONE (PPM)	OXIDANT (PPM)	NO (PPM)	NO2-PAN (PPM)	NOX-PAN (PPM)	PROPENE (PPM)	PAN (PPM)	HCHO (PPM)	HCHO VOL (L)	G39NO /NO2	TOT N (PPM)	TOT C (PPM)
1100	0	0.0	0.0	0.558	0.066	0.623	0.104	0.0	0.003	13.00	0.0	0.624	0.364
1115	15	0.0	0.010	0.533	0.102	0.672	0.096	0.000	0.000	0.000	0.0	0.635	0.364
1130	30	0.0	0.010	0.528	0.095	0.622	0.091	0.0	0.000	0.000	0.0	0.623	0.364
1145	45	0.0	0.010	0.504	0.108	0.611	0.085	0.000	0.000	0.000	0.0	0.612	0.364
1200	60	0.0	0.010	0.482	0.121	0.605	0.081	0.0	0.023	28.00	0.0	0.604	0.348
1215	75	0.0	0.015	0.463	0.140	0.600	0.074	0.000	0.000	0.000	0.0	0.604	0.348
1230	90	0.0	0.015	0.446	0.158	0.599	0.067	0.0	0.000	0.000	0.0	0.605	0.364
1245	105	0.0	0.015	0.420	0.180	0.589	0.061	0.000	0.000	0.000	0.0	0.600	0.364
1300	120	0.001	0.020	0.394	0.186	0.577	0.050	0.0	0.039	31.00	0.002	0.580	0.364
1315	135	0.002	0.025	0.383	0.192	0.573	0.050	0.000	0.000	0.000	0.003	0.575	0.364
1330	150	0.002	0.025	0.360	0.206	0.559	0.049	0.000	0.000	0.000	0.004	0.566	0.364
1345	165	0.002	0.025	0.342	0.219	0.556	0.044	0.000	0.000	0.000	0.004	0.562	0.364
1400	180	0.002	0.025	0.331	0.229	0.551	0.041	0.001	0.054	32.00	0.002	0.560	0.364
1415	195	0.002	0.025	0.312	0.227	0.530	0.0347	0.000	0.000	0.000	0.002	0.540	0.364
1430	210	0.003	0.025	0.288	0.241	0.527	0.035	0.001	0.000	0.000	0.004	0.530	0.364
1445	225	0.003	0.025	0.276	0.251	0.521	0.0257	0.000	0.000	0.000	0.004	0.528	0.364
1500	240	0.002	0.025	0.265	0.246	0.504	0.029	0.001	0.081	29.00	0.003	0.511	0.398
1515	255	0.003	0.025	0.251	0.252	0.501	0.027	0.000	0.000	0.000	0.003	0.501	0.364
1530	270	0.005	0.030	0.228	0.260	0.481	0.023	0.001	0.000	0.000	0.004	0.490	0.364
1545	285	0.005	0.030	0.216	0.264	0.479	0.023	0.000	0.000	0.000	0.004	0.481	0.364
1600	300	0.005	0.030	0.215	0.263	0.469	0.020	0.001	0.094	30.00	0.004	0.479	0.312
1615	315	0.006	0.035	0.204	0.263	0.455	0.019	0.000	0.000	0.000	0.004	0.468	0.364
1630	330	0.007	0.035	0.185	0.273	0.452	0.018	0.002	0.000	0.000	0.005	0.460	0.364
1645	345	0.007	0.040	0.180	0.266	0.436	0.016	0.000	0.054	30.00	0.005	0.448	0.364
1700	360	0.006	0.035	0.169	0.264	0.430	0.015	0.002	0.000	0.000	0.004	0.433	0.261

----- NO DATA TAKEN ----- DATA DISCARDED ? QUESTIONABLE DATA

EC-21 PROPENE
EVACUABLE CHAMBER
1974 MAR 13

AVE SAMPLE TEMP(1) = 85.2
AVE SAMPLE TEMP(2) = 84.9
AVE WALL TEMP(1) = 84.4
AVE WALL TEMP(2) = 83.5
AVE RADION = 1.79
AVE RH = 53.5
AVE SOLAR SIMULATOR POWER = 20.4

CLOCK TIME	ELAPSED TIME (MIN)	TS1 (DEG F)	TS2 (DEG F)	Y1 (DEG F)	Y2 (DEG F)	REL HUM (%)	SSPOWER (KW)	RADION (MV)	CO (PPM)	ACETALD (PPM)	PROPALD (PPM)	ACETONE (PPM)
1100	0.	80.9	81.2	83.3	81.9	54.5	20.39	1.77	2.21	0.008	0.0020	0.009
1115	15.	83.7	84.7	85.7	84.0	54.0	20.20	1.79	2.21	0.008	0.0020	0.009
1130	30.	84.7	85.4	86.4	84.4	53.0	20.69	1.81	2.13	0.008	0.0020	0.009
1145	45.	85.4	86.1	86.8	85.0	51.5	20.01	1.76	2.23	0.008	0.0020	0.009
1200	60.	86.1	86.8	87.1	85.0	50.5	19.90	1.76	2.28	0.026	0.0010	0.009
1215	75.	85.4	85.4	83.0	84.7	50.5	20.00	1.79	2.28	0.008	0.0020	0.009
1230	90.	85.4	85.0	84.0	84.4	52.0	19.85	1.78	2.28	0.008	0.0020	0.009
1245	105.	85.0	85.0	83.0	83.7	53.0	19.89	1.79	2.28	0.008	0.0020	0.009
1300	120.	86.4	85.4	84.4	84.4	52.0	20.19	1.77	2.28	0.051	0.0010	0.027
1315	135.	85.7	85.4	84.7	84.0	53.5	20.07	1.77	2.23	0.008	0.0020	0.009
1330	150.	85.7	85.4	83.7	83.7	53.5	20.07	1.77	2.23	0.008	0.0020	0.009
1345	165.	86.1	85.7	85.7	83.7	53.5	19.80	1.74	2.28	0.008	0.0020	0.009
1400	180.	86.1	85.7	85.4	84.0	53.0	20.60	1.78	2.33	0.008	0.0010	0.029
1415	195.	85.4	84.7	82.6	83.0	53.5	20.60	1.81	2.33	0.008	0.0020	0.009
1430	210.	84.7	84.0	82.3	82.6	54.5	20.61	1.81	2.28	0.008	0.0020	0.009
1445	225.	85.0	84.4	83.7	82.6	55.0	20.51	1.80	2.33	0.008	0.0020	0.009
1500	240.	85.0	84.4	84.4	85.0	55.0	20.61	1.79	2.33	0.074	0.0010	0.026
1515	255.	85.4	84.7	85.0	82.6	54.5	20.68	1.81	2.33	0.008	0.0020	0.009
1530	270.	86.1	85.4	85.4	83.0	54.5	20.68	1.82	2.33	0.008	0.0020	0.009
1545	285.	85.0	84.0	81.6	81.9	54.5	20.68	1.82	2.33	0.008	0.0020	0.009
1600	300.	84.0	85.0	83.3	82.3	54.5	21.01	1.81	2.38	0.050	0.0010	0.024
1615	315.	85.4	84.7	84.4	82.3	54.5	20.99	1.81	2.38	0.008	0.0020	0.009
1630	330.	85.4	85.0	85.0	82.6	54.5	20.57	1.79	2.38	0.008	0.0020	0.009
1645	345.	85.7	85.0	85.4	82.6	54.0	20.61	1.78	2.38	0.008	0.0020	0.009
1700	360.	85.0	84.0	82.3	82.3	54.0	20.60	1.77	2.43	0.045	0.0010	0.022

----- NO DATA TAKEN ----- DATA DISCARDED ----- 7 QUESTIONABLE DATA

EC-38 PURE AIR
EVACUABLE CHAMBER
1974 JUNE 14

BEGIN IRRADIATION 1015 0-25 INCH PYREX FILTER, SPECTRAL FILTER OUT
TS1 NOT SHIELDED WITH REFLECTOR UNTIL 1214
TECO SAMPLING RATE 895 CC/MIN
ALL TEMPERATURES CORRECTED FOR ICE BATH TEMP = 31.2 DEG F
38 GC SAMPLES TAKEN, MAST FACTOR 1.6, CO FACTOR 2.84/27.2, PAN CALIBR. 5

CLOCK TIME	ELAPSED TIME(MIN)	OZONE (PPM)	OXIDANT (PPM)	NO (PPM)	NO2-PAN (PPM)	NOX-PAN (PPM)	N-C4 (PPM)	PAN (PPM)	HCHO (PPM)	HCHO VOL (L)	O3+NO /NO2	TOT N (PPM)	TOT C (PPM)
1015	0-	0-0	0-0	0-012	0-007	0-019	0-002	0-0	0-0	33.00	0-0	0-019	0-035
1030	15-	0-0	0-005	0-013	0-008	0-022	0-000	0-0	0-0	0-000	0-0	0-022	0-000
1045	30-	0-0	0-005	0-013	0-010	0-022	0-000	0-0	0-0	0-000	0-0	0-023	0-000
1115	60-	0-002	0-0	0-012	0-011	0-023	0-002	0-000	0-0	0-000	0-003	0-023	0-000
1145	90-	0-006	0-005	0-000	0-000	0-000	0-000	0-000	0-0	0-000	0-006	0-000	0-000
1215	120-	0-011	0-010	0-012	0-012	0-024	0-004	0-000	0-0	0-000	0-012	0-024	0-000
1245	150-	0-016	0-015	0-013	0-013	0-025	0-000	0-000	0-0	0-000	0-017	0-026	0-000
1315	180-	0-019	0-015	0-012	0-014	0-025	0-004	0-000	0-0	0-000	0-017	0-026	0-000
1345	210-	0-023	0-015	0-013	0-014	0-024	0-000	0-001	0-0	0-000	0-022	0-028	0-000
1415	240-	0-028	0-020	0-013	0-014	0-027	0-006	0-001	0-0	0-000	0-027	0-028	0-000
1445	270-	0-033	0-025	0-012	0-014	0-026	0-000	0-000	0-0	0-000	0-029	0-028	0-000
1515	300-	0-033	0-025	0-012	0-013	0-025	0-008	0-001	0-0	0-000	0-029	0-026	0-002
1546	331-	0-038	0-025	0-012	0-013	0-026	0-000	0-000	0-0	0-000	0-034	0-026	0-000
1615	360-	0-042	0-030	0-012	0-014	0-026	0-008	0-002	0-0	0-000	0-036	0-026	0-000

***** NO DATA TAKEN

--- DATA DISCARDED

7 QUESTIONABLE DATA

EC-38 PURE AIR
EVACUABLE CHAMBER
1974 JUNE 14

AVE SAMPLE TEMP(1) = 89.0
AVE WALL TEMP(1) = 83.5
AVE WALL TEMP(2) = 84.1
AVE RADION = 2.90
AVE RH = 41.0
AVE SOLAR SIMULATOR POWER = 17.0

CLOCK TIME	ELAPSED TIME(MIN)	TS1 (DEG F)	TM1 (DEG F)	TM2 (DEG F)	REL HUM (%)	SSPOWER (KW)	RADION (MV)	CO (PPH)	ACETALD (PPH)	PROPALD (PPH)	ACETONE (PPH)	MEK (PPH)
1015	0.	84.2	85.1	84.0	-----	17.00	2.84	-----	0.001	0.0	0.007	0.002
1030	15.	89.6	85.8	84.4	-----	-----	-----	-----	-----	-----	-----	-----
1045	30.	90.2	85.4	84.7	43.0	17.30	2.97	2.41	-----	-----	-----	-----
1115	60.	91.5	85.8	85.4	42.5	16.80	2.98	-----	0.001	0.0	0.009	0.002
1145	90.	90.2	82.2	84.4	-----	17.30	3.09	2.55	-----	-----	-----	-----
1215	120.	87.7	84.1	84.6	42.0	16.50	2.86	-----	0.001	0.0010	0.011	0.001
1245	150.	88.8	82.4	84.0	42.0	16.50	2.87	2.65	-----	-----	-----	-----
1315	180.	89.4	83.9	84.4	41.0	16.20	2.76	2.69	0.0	0.0	0.014	0.001
1345	210.	89.7	82.8	84.3	39.5	-----	2.77	2.74	-----	-----	-----	-----
1415	240.	88.7	80.8	83.4	40.0	17.30	2.95	2.80	0.0	0.0	0.017	0.001
1445	270.	89.0	81.0	83.4	40.0	-----	2.92	2.81	-----	-----	-----	-----
1515	300.	88.3	81.4	83.3	41.0	17.10	2.94	2.88	0.0	0.0	0.018	0.001
1546	331.	89.0	83.8	83.1	39.5	17.10	2.91	2.92	-----	-----	-----	-----
1615	360.	89.7	84.1	84.4	38.0	17.00	2.87	3.00	-----	0.0	0.022	0.001

----- NO DATA TAKEN ----- DATA DISCARDED ----- ? QUESTIONABLE DATA

EC-39 N-BUTANE
EVACUABLE CHAMBER
1974 JUNE 19

BEGIN IRRADIATION 1145 0.25 INCH PYREX FILTER SPECTRAL FILTER IN
TECO SAMPLING RATE 610 CC/MIN
PAN CONCENTRATIONS ARE CORRECTED FOR OVERLAP WITH BUTYL NITRATE PEAK
ALL TEMPERATURES CORRECTED FOR ICE BATH TEMP = 31.1 DEG F
59 CC SAMPLES TAKEN, MAST FACTOR 1.6, CO FACTOR 2.84/29.5, PAN CALIBR. 5
ESTIMATE C4-N-1 = 2.5 PPB AT T = 6 HOURS

CLOCK TIME	ELAPSED TIME (MIN)	OZONE (PPM)	OXYDANT (PPM)	NO (PPM)	NO2-PAN (PPM)	NOX-PAN (PPM)	N-C4 (PPM)	PAN (PPM)	HCHO (PPM)	HCHO VOL (L)	O3*NO /NO2	TOT N (PPM)	TOT C (PPM)
1145	0	0.0	0.005	0.547	0.060	0.605	2.200	0.0	0.001	30.00	0.0	0.607	8.816
1200	15	0.0	0.025	0.526	0.073	0.600	2.190	0.0	0.001	0.000	0.0	0.559	0.000
1215	30	0.0	0.010	0.504	0.096	0.600	2.190	0.0	0.001	0.000	0.0	0.600	0.000
1230	45	0.0	0.010	0.470	0.119	0.590	2.180	0.0	0.001	0.000	0.0	0.550	0.000
1245	60	0.0	0.015	0.444	0.133	0.581	2.180	0.0	0.008	29.00	0.0	0.580	8.789
1300	75	0.0	0.015	0.415	0.153	0.578	2.110	0.0	0.001	0.000	0.0	0.571	0.000
1315	90	0.0	0.020	0.386	0.182	0.573	2.040	0.0	0.001	0.000	0.0	0.568	0.000
1330	105	0.0	0.025	0.353	0.211	0.565	2.000	0.0	0.001	0.000	0.0	0.557	8.499
1400	135	0.0	0.025	0.324	0.228	0.554	2.070	0.000	0.018	31.00	0.002	0.552	0.000
1415	150	0.002	0.030	0.288	0.258	0.549	2.050	0.000	0.001	0.000	0.001	0.538	0.000
1430	165	0.002	0.035	0.266	0.265	0.533	2.030	0.000	0.001	0.000	0.002	0.523	0.000
1445	180	0.005	0.035	0.240	0.276	0.517	2.010	0.001	0.017	30.50	0.004	0.515	8.308
1500	195	0.006	0.040	0.191	0.292	0.505	1.980	0.001	0.001	0.000	0.004	0.505	0.000
1515	210	0.009	0.040	0.169	0.316	0.488	1.940	0.002	0.001	0.000	0.005	0.486	0.000
1530	225	0.011	0.050	0.150	0.325	0.476	1.930	0.001	0.001	0.000	0.005	0.482	8.083
1545	240	0.014	0.050	0.132	0.338	0.467	1.910	0.003	0.033	28.00	0.006	0.467	0.000
1600	255	0.018	0.055	0.109	0.346	0.454	1.900	0.001	0.001	0.000	0.007	0.461	0.000
1615	270	0.024	0.060	0.096	0.350	0.447	1.900	0.005	0.001	0.000	0.007	0.450	0.000
1630	285	0.030	0.063	0.084	0.350	0.433	1.880	0.001	0.001	0.000	0.008	0.442	7.932
1645	300	0.038	0.075	0.076	0.349	0.421	1.860	0.006	0.031	30.00	0.008	0.431	0.000
1700	315	0.043	0.075	0.061	0.352	0.413	1.820	0.001	0.001	0.000	0.010	0.424	0.000
1715	330	0.055	0.090	0.060	0.345	0.401	1.790	0.007	0.042	26.00	0.010	0.414	0.000
1730	345	0.062	0.105	0.054	0.341	0.389	1.790	0.001	0.001	0.000	0.010	0.404	7.709
1745	360	0.073	0.100	0.048	0.337	0.381	1.780	0.008	0.001	0.000	0.010	0.404	7.709

----- NO DATA TAKEN ----- DATA DISCARDED ? QUESTIONABLE DATA

EC-39 N-BUTANE
EVACUABLE CHAMBER
1974 JUNE 19

AVE SAMPLE TEMP(1) = 85.5
AVE SAMPLE TEMP(2) = 86.3
AVE WALL TEMP(1) = 81.0
AVE WALL TEMP(2) = 82.3
AVE RADOM = 2.25
AVE RH = 53.0
AVE SOLAR SIMULATOR POWER = 17.4

CLOCK TIME	ELAPSED TIME (MIN)	TS1 (DEG F)	TS2 (DEG F)	TM1 (DEG F)	TM2 (DEG F)	REL HUM (%)	SSPOUR (KNI)	RADOM (NVI)	CO (PPM)	ACETALD (PPM)	PROPALD (PPM)	ACETONE (PPM)	MEK (PPM)	C4-N-2 (PPM)
1145	0.	82.9	83.9	87.5	85.2	51.5	17.45	2.25	2.08	0.001	0.0	0.003	0.001	0.0
1200	15.	86.0	87.7	86.9	85.5	50.5	17.10	2.24	2.10	0.000	0.000	0.000	0.000	0.000
1215	30.	88.2	88.1	85.5	85.4	50.0	16.95	2.18	2.11	0.000	0.000	0.000	0.000	0.000
1230	45.	85.0	85.6	77.9	83.1	54.5	17.18	2.26	2.16	0.011	0.0	0.003	0.005	0.002
1245	60.	85.2	85.9	80.2	83.2	54.5	17.49	2.28	2.18	0.000	0.000	0.000	0.000	0.000
1300	75.	85.3	86.0	81.0	82.8	55.0	17.40	2.19	2.19	0.000	0.000	0.000	0.000	0.003
1315	90.	85.6	86.3	81.5	82.8	54.5	17.10	2.22	2.22	0.000	0.000	0.000	0.000	0.000
1330	105.	85.4	86.1	79.3	82.1	54.5	17.50	2.22	2.22	0.000	0.000	0.000	0.000	0.000
1345	120.	84.9	85.9	79.3	82.0	55.0	17.11	2.23	2.23	0.023	0.0	0.005	0.030	0.005
1400	135.	84.9	85.9	79.3	82.0	55.0	17.20	2.24	2.24	0.000	0.000	0.000	0.000	0.000
1415	150.	84.7	85.7	79.1	81.5	55.5	17.09	2.20	2.25	0.000	0.000	0.000	0.000	0.006
1430	165.	84.7	85.7	79.1	81.5	55.5	17.55	2.28	2.28	0.000	0.000	0.000	0.000	0.000
1445	180.	83.9	85.0	78.3	80.6	56.5	17.31	2.27	2.27	0.030	0.0	0.008	0.044	0.007
1500	195.	84.2	85.3	79.0	80.7	56.0	17.20	2.26	2.30	0.000	0.000	0.000	0.000	0.000
1515	210.	84.6	85.7	79.9	80.9	56.0	17.42	2.25	2.30	0.000	0.000	0.000	0.000	0.008
1530	225.	85.1	86.0	80.5	81.2	54.5	17.42	2.27	2.27	0.000	0.000	0.000	0.000	0.009
1545	240.	86.4	85.4	81.0	81.4	53.0	17.37	2.24	2.36	0.039	0.0	0.012	0.058	0.009
1600	255.	85.7	86.7	81.4	81.7	53.0	17.77	2.25	2.37	0.000	0.000	0.000	0.000	0.010
1615	270.	86.1	87.1	81.7	82.0	53.0	17.64	2.25	2.37	0.000	0.000	0.000	0.000	0.010
1630	285.	86.3	87.3	81.5	81.9	53.0	17.19	2.21	2.42	0.000	0.000	0.000	0.000	0.011
1645	300.	85.5	86.5	79.3	81.5	51.0	17.77	2.20	2.45	0.044	0.0	0.016	0.067	0.011
1700	315.	85.6	86.8	80.5	81.8	51.0	17.91	2.29	2.47	0.000	0.000	0.000	0.000	0.011
1715	330.	86.0	87.1	81.3	82.1	50.5	17.91	2.30	2.50	0.000	0.000	0.000	0.000	0.011
1730	345.	86.4	87.4	81.7	82.4	50.0	17.91	2.30	2.51	0.000	0.000	0.000	0.000	0.011
1745	360.	85.5	86.6	78.7	81.5	49.5	17.15	2.20	2.54	0.050	0.0	0.022	0.080	0.011

7 QUESTIONABLE DATA

DATA DISCARDED

NO DATA TAKEN

EC-40 DARK
EVACUABLE CHAMBER
1974 JUNE 20

ALL TEMPERATURES CORRECTED FOR ICE BATH TEMP = 31.0 DEG F
1800 PANALYZER SAMPLE MAY BE CONTAMINATED WITH AMBIENT AIR
C2-N IDENTIFICATION QUESTIONABLE

32 GC SAMPLES TAKEN, WAST FACTOR 1.6, CO FACTOR 10 PPM FULL SCALE, PAN CALIBR. 5

CLOCK TIME	ELAPSED TIME (MIN)	OZONE (PPM)	OXIDANT (PPM)	NO (PPM)	NO2-PAN (PPM)	NOX-PAN (PPM)	N-C4 (PPM)	PAN (PPM)	HCHO (PPM)	HCHO VOL (L)	Q3-HQ /NO2	TOT N (PPM)	TOT C (PPM)
1200	0.	0.0	0.0	1.026	0.125	1.151	3.910	0.0	0.0	43.00	0.0	1.152	15.658
1230	30.	0.0	0.010	1.009	0.130	1.150	3.790	0.0	0.0	0.0	0.0	1.140	0.0
1300	60.	0.0	0.010	1.007	0.141	1.139	3.850	0.0	0.0	0.0	0.0	1.148	0.0
1330	90.	0.0	0.015	0.986	0.144	1.134	3.830	0.0	0.0	0.0	0.0	1.130	0.0
1400	120.	0.0	0.015	0.966	0.153	1.116	3.830	0.0	0.0	65.00	0.0	1.120	15.343
1430	150.	0.0	0.015	0.954	0.165	1.104	3.750	0.0	0.0	0.0	0.0	1.120	0.0
1500	180.	0.0	0.015	0.929	0.167	1.091	3.710	0.0	0.0	0.0	0.0	1.097	0.0
1530	210.	0.0	0.015	0.918	0.170	1.088	3.670	0.0	0.0	0.0	0.0	1.088	0.0
1600	240.	0.0	0.015	0.895	0.173	1.067	3.670	0.0	0.0	60.00	0.0	1.069	14.713
1630	270.	0.0	0.015	0.871	0.190	1.055	3.600	0.0	0.0	0.0	0.0	1.063	0.0
1700	300.	0.0	0.015	0.864	0.185	1.041	3.560	0.0	0.0	0.0	0.0	1.052	0.0
1730	330.	0.0	0.015	0.840	0.188	1.028	0.0	0.0	0.0	60.50	0.0	1.032	0.0
1800	360.	0.0	0.015	0.838	0.189	1.016	3.490	0.0007	0.0	0.0	0.0	1.032	14.011

***** NO DATA TAKEN

--- DATA DISCARDED

7 QUESTIONABLE DATA

EC-40 DARK
EVACUABLE CHAMBER
1974 JUNE 20

AVE SAMPLE TEMP(1) = 85.7
AVE SAMPLE TEMP(2) = 84.8
AVE WALL TEMP(1) = 88.8
AVE WALL TEMP(2) = 86.5
AVE RH = 40.5

CLOCK TIME	ELAPSED TIME (MIN)	TS1 (DEG F)	TS2 (DEG F)	TS1 (DEG F)	TS2 (DEG F)	REL HUM (%)	CO (PPM)	ACETALD (PPM)	PROPALD (PPM)	ACETONE (PPM)	MEK (PPM)	C2-N (PPM)
1200	0.	84.9	84.1	87.3	85.7	44.0	2.05	0.002	0.0	0.003	0.001	0.0006
1230	30.	85.4	84.5	88.3	85.9	43.0	2.04	0.000	0.0	0.000	0.000	0.000
1300	60.	84.9	84.1	86.7	85.7	42.5	2.02	0.002	0.0	0.003	0.001	0.000
1330	90.	85.5	84.6	88.1	86.0	41.5	2.00	0.000	0.0	0.000	0.000	0.000
1400	120.	85.1	84.3	86.9	86.0	41.0	2.00	0.003	0.0	0.004	0.001	0.0004
1430	150.	85.3	84.5	89.5	85.9	41.0	1.97	0.000	0.0	0.000	0.000	0.000
1500	180.	85.6	84.7	88.2	86.3	40.0	1.97	0.003	0.0	0.000	0.000	0.000
1530	210.	85.3	84.5	87.8	86.2	39.5	1.95	0.000	0.0	0.000	0.000	0.000
1600	240.	86.3	85.2	91.0	86.8	39.5	1.93	0.003	0.0	0.006	0.002	0.0006
1630	270.	86.0	85.1	88.9	87.1	39.0	1.92	0.000	0.0	0.000	0.000	0.000
1700	300.	86.4	85.4	90.6	87.3	38.5	1.90	0.004	0.0	0.007	0.002	0.000
1730	330.	86.8	85.6	91.7	87.7	38.0	1.90	0.000	0.0	0.000	0.000	0.000
1800	360.	86.5	85.5	89.7	87.7	38.0	1.88	0.004	0.0010	0.007	0.002	0.0049

***** NO DATA TAKEN ----- DATA DISCARDED 7 QUESTIONABLE DATA

EC-41 N-BUTANE
EVACUABLE CHAMBER
1974 JUNE 21

BEGIN IRRADIATION 1100 0.25 INCH PYREX FILTER
PAN CONCENTRATIONS ARE CORRECTED FOR OVERLAP WITH BUTYL NITRATE PEAK
ALL TEMPERATURES CORRECTED FOR ICE BATH TEMP = 31.3 DEG F
59 CC SAMPLES TAKEN, MAST FACTOR 1.6, CO FACTOR 2.84/28.7, PAN CALIBR. 5

CLOCK TIME	ELAPSED TIME(MIN)	OZONE (PPM)	OXIDANT (PPM)	NO (PPM)	NO2-PAN (PPM)	NOX-PAN (PPM)	N-C4 (PPM)	PAN (PPM)	HCHO (PPM)	HCHO VOL (L)	Q3*NO /NO2	TOT N (PPM)	TOT C (PPM)
1100	0	0.0	0.005	0.524	0.068	0.593	4.030	0.0	0.0	20.00	0.0	0.593	16.145
1115	15	0.0	0.010	0.548	0.097	0.588	3.950	0.0	0.0	0.000	0.0	0.587	0.000
1130	30	0.0	0.010	0.534	0.142	0.585	3.870	0.0	0.0	0.000	0.0	0.578	0.000
1145	45	0.0	0.020	0.590	0.186	0.572	3.790	0.0	0.0	0.000	0.0	0.582	0.000
1200	60	0.0	0.025	0.323	0.225	0.558	3.760	0.0	0.002	34.50	0.0	0.553	15.329
1215	75	0.002	0.030	0.262	0.271	0.542	3.710	0.002	0.000	0.000	0.002	0.540	0.000
1230	90	0.003	0.040	0.220	0.300	0.528	3.670	0.002	0.000	0.000	0.002	0.529	0.000
1245	105	0.008	0.045	0.181	0.332	0.510	3.640	0.003	0.013	31.00	0.004	0.524	0.000
1300	120	0.012	0.050	0.144	0.356	0.500	3.570	0.004	0.013	0.000	0.005	0.514	14.982
1315	135	0.018	0.060	0.116	0.371	0.487	3.560	0.004	0.000	0.000	0.006	0.503	0.000
1330	150	0.028	0.075	0.086	0.384	0.473	3.480	0.004	0.000	0.000	0.006	0.488	0.000
1345	165	0.040	0.085	0.072	0.388	0.460	3.440	0.006	0.013	30.00	0.007	0.479	0.000
1400	180	0.054	0.100	0.060	0.391	0.444	3.400	0.006	0.010	0.000	0.008	0.472	14.331
1415	195	0.068	0.110	0.048	0.385	0.430	3.380	0.010	0.000	0.000	0.008	0.455	0.000
1430	210	0.082	0.125	0.036	0.384	0.420	3.340	0.010	0.000	0.000	0.010	0.444	0.000
1445	225	0.098	0.140	0.030	0.368	0.404	3.320	0.013	0.023	30.00	0.009	0.424	14.010
1500	240	0.112	0.145	0.030	0.362	0.390	3.280	0.016	0.000	0.000	0.011	0.412	0.000
1515	255	0.128	0.165	0.024	0.358	0.376	3.270	0.016	0.000	0.000	0.010	0.397	0.000
1530	270	0.142	0.175	0.024	0.336	0.362	3.230	0.021	0.027	30.00	0.012	0.382	0.000
1545	285	0.159	0.193	0.024	0.328	0.351	3.220	0.021	0.000	0.000	0.013	0.383	13.750
1600	300	0.174	0.205	0.024	0.315	0.336	3.220	0.024	0.000	0.000	0.014	0.371	0.000
1615	315	0.188	0.220	0.023	0.303	0.324	3.210	0.024	0.000	0.000	0.015	0.358	0.000
1630	330	0.205	0.230	0.023	0.289	0.309	3.180	0.024	0.000	0.000	0.018	0.358	0.000
1645	345	0.222	0.240	0.023	0.285	0.297	3.110	0.028	0.029	28.00	0.017	0.334	13.385
1700	360	0.237	0.255	0.019	0.263	0.282	3.110	0.028	0.000	0.000			

----- NO DATA TAKEN ----- DATA DISCARDED 7 QUESTIONABLE DATA

EC-41 N-BUTANE
EVACUABLE CHAMBER
1974 JUNE 21

AVE SAMPLE TEMP(1) = 86.1
AVE SAMPLE TEMP(2) = 86.7
AVE WALL TEMP(1) = 81.5
AVE WALL TEMP(2) = 82.4
AVE PADION = 2.23
AVE RH = 49.5
AVE SOLAR SIMULATOR POWER = 17.5

CLOCK TIME	ELAPSED TIME(MIN)	TS1 (DEG F)	TS2 (DEG F)	TW1 (DEG F)	TW2 (DEG F)	REL HUM (%)	SSPOMER (KW)	RADIOM (MW)	CO (PPM)	ACETALD (PPM)	PROPALD (PPM)	ACETONE (PPM)	MEK (PPM)	C4-N-2 (PPM)	C4-N-1 (PPM)
1100	0-	81.6	83.3	85.6	84.1	53.0	17.61	2.23	2.77	0.002	0.0	0.003	0.003	0.0	0.0001
1115	15-	88.3	87.6	85.9	85.0	53.0	17.60	2.26	2.75	0.002	0.0	0.003	0.003	0.0	0.0001
1130	30-	88.0	87.6	85.3	84.5	53.0	17.10	2.21	2.79	0.002	0.0	0.003	0.003	0.002	0.0005
1145	45-	85.0	85.2	77.4	82.5	53.0	17.90	2.27	2.84	0.002	0.0	0.003	0.003	0.002	0.0005
1200	60-	84.8	85.2	78.2	82.1	53.0	17.50	2.25	2.84	0.024	0.0	0.006	0.030	0.005	0.0006
1215	75-	81.0	85.2	78.6	82.0	53.0	17.50	2.21	2.89	0.002	0.0	0.003	0.003	0.005	0.0006
1230	90-	85.3	85.6	80.6	81.9	53.0	17.15	2.19	2.90	0.002	0.0	0.003	0.003	0.007	0.0007
1245	105-	85.8	86.1	81.2	82.0	53.0	17.55	2.23	2.90	0.002	0.0	0.003	0.003	0.009	0.0017
1300	120-	86.1	86.5	81.6	82.2	53.0	17.30	2.21	2.91	0.043	0.0	0.010	0.061	0.009	0.0017
1315	135-	86.3	86.7	81.8	82.2	53.0	17.30	2.22	2.95	0.002	0.0	0.003	0.003	0.011	0.0019
1330	150-	85.1	85.7	77.9	81.1	53.0	17.10	2.20	3.00	0.002	0.0	0.003	0.003	0.011	0.0019
1345	165-	85.2	85.8	79.7	81.4	53.0	17.20	2.20	3.02	0.002	0.0	0.003	0.003	0.012	0.0024
1400	180-	85.5	86.2	80.6	81.6	53.0	17.20	2.21	3.02	0.052	0.0	0.017	0.083	0.012	0.0024
1415	195-	85.6	86.1	80.0	81.3	53.0	17.30	2.20	3.03	0.002	0.0	0.003	0.003	0.012	0.0024
1430	210-	85.4	85.9	80.2	80.6	53.0	17.40	2.22	3.06	0.002	0.0	0.003	0.003	0.012	0.0024
1445	225-	85.5	85.9	79.4	80.7	53.0	17.20	2.21	3.10	0.002	0.0	0.003	0.003	0.012	0.0024
1500	240-	85.8	86.4	80.2	81.1	53.0	17.60	2.19	3.11	0.067	0.0	0.022	0.102	0.016	0.0028
1515	255-	86.6	86.9	81.2	81.6	53.0	17.60	2.20	3.11	0.002	0.0	0.003	0.003	0.016	0.0028
1530	270-	87.1	87.5	82.6	81.9	53.0	17.80	2.20	3.11	0.002	0.0	0.003	0.003	0.017	0.0038
1545	285-	87.8	87.9	82.9	82.4	53.0	17.50	2.26	3.15	0.002	0.0	0.003	0.003	0.017	0.0038
1600	300-	88.1	88.4	83.3	82.8	53.0	17.60	2.26	3.17	0.002	0.0	0.003	0.003	0.019	0.0038
1615	315-	88.6	89.1	83.7	83.4	53.0	18.10	2.26	3.29	0.077	0.0	0.034	0.114	0.019	0.0038
1630	330-	88.8	89.2	84.0	83.7	53.0	17.90	2.28	3.29	0.002	0.0	0.003	0.003	0.020	0.0038
1645	345-	89.3	89.5	83.8	84.0	53.0	17.30	2.26	3.27	0.002	0.0	0.003	0.003	0.020	0.0038
1700	360-	85.6	86.8	81.9	83.9	45.5	17.70	2.29	3.27	0.082	0.0	0.034	0.125	0.020	0.0038

***** NO DATA TAKEN ----- DATA DISCARDED 7 QUESTIONABLE DATA

EC-42 N-BUTANE
EVACUABLE CHAMBER
1974 JUNE 24

BEGIN IRRADIATION 1115 0.25 INCH PYREX FILTER
PAN CONCENTRATIONS NOT SUFFICIENT FOR MEASUREMENT
ALL TEMPERATURES CORRECTED FOR ICE BATH TEMP = 31.0 DEG F
59 GC SAMPLES TAKEN, MAST FACTOR 1.6, CO FACTOR 2.84/27.3
ESTIMATE C4-N-1 < 0.5 PPB AT T = 6 HOURS

CLOCK TIME	ELAPSED TIME(MIN)	OZONE (PPM)	OXYDANT (PPM)	NO (PPM)	NO2-PAN (PPM)	NOX-PAN (PPM)	N-C4 (PPM)	HCHO (PPM)	HCHO VOL (L)	Q3-HNO /NO2	TOT N (PPM)	TOT C (PPM)
1115	0.	0.0	0.005	0.542	0.059	0.599	0.385	0.007	0.007	0.0	0.601	0.000
1130	15.	0.0	0.005	0.534	0.061	0.594	0.385	0.007	0.007	0.0	0.595	0.000
1145	30.	0.0	0.005	0.522	0.071	0.589	0.375	0.007	0.007	0.0	0.593	0.000
1200	45.	0.0	0.005	0.515	0.074	0.588	0.370	0.007	0.007	0.0	0.589	0.000
1215	60.	0.0	0.005	0.496	0.091	0.588	0.368	0.007	0.007	0.0	0.587	0.000
1230	75.	0.0	0.005	0.480	0.096	0.576	0.355	0.010	0.010	0.0	0.574	0.000
1245	90.	0.0	0.005	0.454	0.108	0.576	0.346	0.007	0.007	0.0	0.562	0.000
1300	105.	0.0	0.005	0.449	0.117	0.578	0.355	0.007	0.007	0.0	0.566	0.000
1315	120.	0.0	0.005	0.432	0.124	0.555	0.352	0.012	0.012	0.0	0.557	1.490
1330	135.	0.0	0.010	0.415	0.138	0.550	0.347	0.007	0.007	0.0	0.554	0.000
1345	150.	0.0	0.010	0.398	0.143	0.545	0.343	0.007	0.007	0.0	0.542	0.000
1400	165.	0.0	0.010	0.386	0.152	0.538	0.340	0.007	0.007	0.0	0.540	0.000
1415	180.	0.002	0.010	0.372	0.157	0.529	0.336	0.018	0.018	0.004	0.530	1.443
1430	195.	0.0	0.015	0.355	0.177	0.512	0.320	0.007	0.007	0.0	0.526	0.000
1445	210.	0.001	0.015	0.337	0.177	0.512	0.320	0.007	0.007	0.002	0.516	0.000
1500	225.	0.002	0.015	0.326	0.189	0.495	0.318	0.007	0.007	0.003	0.509	0.000
1515	240.	0.001	0.015	0.310	0.189	0.490	0.317	0.0167	0.0167	0.001	0.500	1.403
1530	255.	0.002	0.015	0.296	0.196	0.490	0.314	0.007	0.007	0.004	0.494	0.000
1545	270.	0.003	0.015	0.281	0.202	0.483	0.311	0.007	0.007	0.004	0.485	0.000
1600	285.	0.002	0.015	0.264	0.204	0.475	0.306	0.007	0.007	0.003	0.473	0.000
1615	300.	0.002	0.015	0.256	0.210	0.463	0.303	0.042	0.042	0.003	0.468	1.392
1630	315.	0.002	0.015	0.242	0.214	0.456	0.301	0.007	0.007	0.003	0.458	0.000
1645	330.	0.003	0.015	0.230	0.217	0.447	0.293	0.007	0.007	0.003	0.450	0.000
1700	345.	0.004	0.015	0.218	0.222	0.437	0.289	0.042	0.042	0.004	0.443	0.000
1715	360.	0.004	0.020	0.206	0.224	0.428	0.286	0.007	0.007	0.005	0.433	1.340

----- NO DATA TAKEN ----- DATA DISCARDED 7 QUESTIONABLE DATA

EC-42 N-BUTANE
EVACUABLE CHAMBER
1974 JUNE 24

AVE SAMPLE TEMP(1) = 87.5
AVE SAMPLE TEMP(2) = 87.6
AVE WALL TEMP(1) = 83.1
AVE WALL TEMP(2) = 84.1
AVE RADOM = 2.24
AVE RH = 40.5
AVE SOLAR SIMULATOR POWER = 17.7

CLOCK TIME	ELAPSED TIME(MIN)	TS1 (DEG F)	TS2 (DEG F)	TW1 (DEG F)	TW2 (DEG F)	REL HUM (%)	SSPOWER (KW)	RADOM (MV)	CO (PPM)	ACETALD (PPM)	PROPALD (PPM)	ACETONE (PPM)	MEK (PPM)	C4-N-2 (PPM)
1115	0.	82.9	82.9	82.2	84.7	47.5	18.00	2.31	3.24	0.002	0.0	0.004	0.001	0.0
1130	15.	86.5	86.7	84.4	84.3	22.0	17.30	2.23	3.27	0.002	0.0	0.004	0.001	0.0
1145	30.	87.6	87.6	86.2	84.5	46.5	17.10	2.23	3.29	0.002	0.0	0.004	0.001	0.0
1200	45.	86.8	86.9	81.5	84.0	22.0	17.10	2.18	3.33	0.002	0.0	0.005	0.003	0.0
1215	60.	86.1	86.2	81.4	81.6	47.0	17.30	2.21	3.33	0.002	0.0	0.005	0.003	0.0
1230	75.	86.4	86.4	82.4	83.6	47.0	17.20	2.19	3.34	0.002	0.0	0.005	0.003	0.0
1245	90.	86.7	86.6	82.7	83.5	46.5	17.60	2.25	3.36	0.002	0.0	0.005	0.003	0.000
1300	105.	87.1	87.0	83.2	83.7	45.5	17.70	2.24	3.39	0.002	0.0	0.005	0.003	0.000
1315	120.	87.5	87.5	83.4	83.8	45.0	18.00	2.30	3.39	0.009	0.0	0.007	0.007	0.001
1330	135.	87.8	87.7	83.6	84.0	22.0	17.40	2.23	3.42	0.002	0.0	0.005	0.003	0.001
1345	150.	88.1	88.1	84.1	84.2	43.5	17.30	2.21	3.43	0.002	0.0	0.005	0.003	0.001
1400	165.	88.3	88.3	84.1	84.4	42.5	17.30	2.15	3.44	0.002	0.0	0.005	0.003	0.001
1415	180.	87.6	87.6	81.4	83.7	42.5	18.00	2.24	3.47	0.009	0.0	0.007	0.009	0.001
1430	195.	87.5	87.5	81.9	83.8	43.0	17.90	2.27	3.49	0.002	0.0	0.007	0.009	0.001
1445	210.	87.7	87.8	82.8	84.0	42.5	17.80	2.26	3.50	0.002	0.0	0.007	0.009	0.001
1500	225.	88.3	88.3	83.4	84.4	42.0	18.00	2.23	3.53	0.002	0.0	0.007	0.009	0.001
1515	240.	88.4	88.6	83.9	84.5	41.5	18.00	2.26	3.54	0.010	0.0	0.013	0.013	0.002
1530	255.	88.8	88.9	84.3	84.9	40.5	17.80	2.26	3.56	0.002	0.0	0.007	0.009	0.002
1545	270.	88.7	88.8	82.8	84.4	40.0	17.90	2.23	3.58	0.002	0.0	0.007	0.009	0.002
1600	285.	88.1	88.2	82.5	84.4	40.5	17.90	2.24	3.62	0.002	0.0	0.007	0.009	0.002
1615	300.	88.4	88.6	83.6	84.7	39.0	17.90	2.25	3.64	0.012	0.0	0.015	0.015	0.002
1630	315.	87.8	87.9	81.1	84.1	40.5	18.00	2.27	3.65	0.002	0.0	0.007	0.009	0.003
1645	330.	88.0	88.1	82.5	84.4	40.5	18.20	2.29	3.65	0.002	0.0	0.007	0.009	0.003
1700	345.	88.3	88.4	83.3	84.6	40.0	17.80	2.24	3.68	0.002	0.0	0.007	0.009	0.002
1715	360.	88.6	88.7	83.9	84.9	39.5	17.80	2.25	3.70	0.013	0.0	0.017	0.017	0.002

===== NO DATA TAKEN ----- DATA DISCARDED 7 QUESTIONABLE DATA

EC-43 N-BUTANE
EVACUABLE CHAMBER
1974 JUNE 25

BEGIN IRRADIATION 1015 0.25 INCH PYREX FILTER
PAN CONCENTRATIONS ARE CORRECTED FOR OVERLAP WITH BUTYL NITRATE PEAK
ALL TEMPERATURES CORRECTED FOR ICE BATH TEMP = 31.1 DEG F
59 GC SAMPLES TAKEN, MAST FACTOR 1.6, CO FACTOR 2.84/26.6, PAN CALIBR. 5
ESTIMATE C6-N-1 < 0.5 PPM AT T = 6 HOURS

CLOCK TIME	ELAPSED TIME (MIN)	OZONE (PPM)	OXIDANT (PPM)	NO (PPM)	NO2-PAN (PPM)	NOX-PAN (PPM)	N-C6 (PPM)	PAN (PPM)	NCHO (PPM)	NCHO VOL (L)	O3+NO /NO2	TOT N (PPM)	TOT C (PPM)
1015	0.	0.0	0.0	0.126	0.013	0.137	0.380	0.0	0.001	28.00	0.0	0.139	1.360
1030	15.	0.0	0.0	0.115	0.022	0.134	0.373	0.000	0.000	0.000	0.0	0.137	0.000
1045	30.	0.0	0.0	0.104	0.034	0.136	0.372	0.0	0.000	0.000	0.0	0.138	0.000
1100	45.	0.0	0.0	0.091	0.040	0.133	0.366	0.000	0.000	0.000	0.0	0.132	0.000
1115	60.	0.002	0.003	0.079	0.053	0.131	0.3467	0.000	0.0297	29.00	0.002	0.133	0.000
1130	75.	0.004	0.010	0.062	0.065	0.126	0.355	0.000	0.000	0.000	0.004	0.128	0.000
1145	90.	0.008	0.015	0.053	0.070	0.128	0.347	0.001	0.000	0.000	0.004	0.125	0.000
1200	105.	0.013	0.020	0.044	0.076	0.119	0.344	0.000	0.000	0.000	0.007	0.122	0.000
1215	120.	0.019	0.025	0.038	0.079	0.114	0.343	0.001	0.009	30.00	0.009	0.120	1.475
1230	135.	0.026	0.030	0.034	0.080	0.110	0.337	0.000	0.000	0.000	0.011	0.116	0.000
1245	150.	0.034	0.035	0.030	0.078	0.106	0.335	0.002	0.000	0.000	0.013	0.112	0.000
1300	165.	0.041	0.040	0.025	0.078	0.102	0.321	0.000	0.000	0.000	0.014	0.108	0.000
1315	180.	0.044	0.045	0.024	0.075	0.097	0.319	0.002	0.003	30.00	0.015	0.103	1.432
1330	195.	0.053	0.050	0.024	0.074	0.095	0.319	0.000	0.000	0.000	0.017	0.103	0.000
1345	210.	0.058	0.055	0.022	0.073	0.091	0.311	0.003	0.000	0.000	0.017	0.100	0.000
1400	225.	0.066	0.065	0.019	0.071	0.087	0.310	0.000	0.000	0.000	0.016	0.096	0.000
1415	240.	0.073	0.065	0.018	0.067	0.084	0.304	0.004	0.015	29.00	0.020	0.091	1.388
1430	255.	0.078	0.075	0.017	0.064	0.079	0.295	0.000	0.000	0.000	0.021	0.088	0.000
1445	270.	0.086	0.080	0.018	0.059	0.076	0.304	0.005	0.000	0.000	0.024	0.085	0.000
1500	285.	0.091	0.085	0.018	0.059	0.074	0.291	0.000	0.000	0.000	0.024	0.083	0.000
1515	300.	0.097	0.090	0.017	0.057	0.070	0.289	0.004	0.014	29.00	0.029	0.083	1.355
1530	315.	0.103	0.095	0.016	0.054	0.068	0.288	0.000	0.000	0.000	0.030	0.079	0.000
1545	330.	0.107	0.100	0.014	0.051	0.064	0.284	0.007	0.000	0.000	0.033	0.077	0.000
1600	345.	0.114	0.105	0.014	0.048	0.062	0.281	0.000	0.013	31.00	0.038	0.074	0.000
1615	360.	0.120	0.105	0.014	0.047	0.060	0.269	0.009	0.000	0.000	0.037	0.073	1.307

----- NO DATA TAKEN ----- DATA DISCARDED 7 QUESTIONABLE DATA

EC-43 N-BUTANE
EVACUABLE CHAMBER
1974 JUNE 25

AVE SAMPLE TEMP(1) = 87.5
AVE SAMPLE TEMP(2) = 87.4
AVE WALL TEMP(1) = 82.9
AVE WALL TEMP(2) = 83.9
AVE RADION = 2.23
AVE RH = 42.5
AVE SOLAR SIMULATOR POWER = 18.0

CLOCK TIME	ELAPSED TIME (MIN)	TS1 (DEG F)	TS2 (DEG F)	TW1 (DEG F)	TW2 (DEG F)	REL HUM (%)	SSPOHER (KM)	RADION (MW)	CO (PPM)	ACETALD (PPM)	PROPALD (PPM)	ACETONE (PPM)	HEK (PPM)	C4-N-2 (PPM)
1015	0.	83.8	83.9	84.0	83.9	51.5	17.80	2.22	2.80	0.005	0.0010	0.004	0.002	0.0
1030	15.	85.9	85.9	86.0	85.8	52.0	17.50	2.25	2.80	0.005	0.005	0.004	0.002	0.0
1045	30.	85.9	86.0	86.1	85.5	52.0	17.50	2.19	2.84	0.005	0.005	0.004	0.002	0.0
1100	45.	86.3	86.3	86.3	83.4	52.5	17.70	2.18	2.87	0.005	0.005	0.004	0.002	0.0
1115	60.	86.6	86.5	86.7	83.4	52.0	18.10	2.25	2.89	0.007	0.0	0.004	0.005	0.000
1130	75.	87.1	86.7	83.1	83.5	52.0	18.00	2.22	2.92	0.005	0.005	0.004	0.005	0.000
1145	90.	87.2	86.9	83.2	83.5	50.0	17.60	2.19	2.93	0.005	0.005	0.004	0.005	0.001
1200	105.	87.4	87.1	83.5	83.5	50.0	17.60	2.19	2.94	0.005	0.005	0.004	0.005	0.001
1215	120.	87.9	87.7	83.8	83.8	47.0	17.90	2.24	2.98	0.008	0.0	0.010	0.010	0.001
1230	135.	88.3	88.0	84.1	84.0	47.0	18.00	2.20	2.98	0.005	0.005	0.004	0.005	0.001
1245	150.	88.1	87.1	80.7	83.5	48.0	18.00	2.22	3.00	0.005	0.005	0.004	0.005	0.002
1300	165.	87.0	87.0	80.8	83.4	48.0	18.00	2.24	3.00	0.005	0.005	0.004	0.005	0.002
1315	180.	87.2	87.1	82.0	83.5	48.0	18.40	2.25	3.07	0.010	0.0	0.013	0.013	0.032
1330	195.	87.6	87.5	82.7	83.9	46.5	18.20	2.23	3.09	0.005	0.005	0.004	0.005	0.002
1345	210.	87.8	87.7	83.2	83.9	46.5	18.20	2.23	3.13	0.005	0.005	0.004	0.005	0.002
1400	225.	88.1	88.1	83.6	84.1	44.5	18.20	2.25	3.17	0.012	0.0	0.017	0.016	0.002
1415	240.	88.5	88.4	84.0	84.3	43.5	18.30	2.23	3.18	0.005	0.005	0.004	0.005	0.002
1430	255.	88.7	88.7	84.3	84.6	43.5	18.30	2.24	3.21	0.005	0.005	0.004	0.005	0.003
1445	270.	88.1	88.0	81.3	84.0	44.0	17.90	2.22	3.24	0.005	0.005	0.004	0.005	0.003
1500	285.	88.2	88.2	82.5	84.2	44.0	17.90	2.23	3.28	0.014	0.0	0.019	0.019	0.003
1515	300.	87.9	88.0	82.0	84.1	43.5	17.90	2.24	3.31	0.005	0.005	0.004	0.005	0.003
1530	315.	88.3	88.2	83.0	84.4	43.0	18.20	2.24	3.31	0.005	0.005	0.004	0.005	0.003
1545	330.	88.4	88.4	83.6	84.6	42.5	18.10	2.25	3.34	0.005	0.005	0.004	0.005	0.003
1600	345.	88.8	88.8	84.1	84.8	41.5	18.10	2.25	3.37	0.015	0.0	0.023	0.022	0.003
1615	360.	89.1	89.1	84.5	85.1	41.5	18.10	2.25	3.37	0.015	0.0	0.023	0.022	0.003

***** NO DATA TAKEN ***** DATA DISCARDED ? QUESTIONABLE DATA

EC-44 N-BUTANE
EVACUABLE CHAMBER
1974 JUNE 26

BEGIN IRRADIATION AT 1000 0.25 INCH PYREX FILTER
PAN PRESENT IN LOW CONCENTRATIONS AND OBSERVED BY BUTYL NITRATE
1945 HCHO VOL ESTIMATED
ALL TEMPERATURES CORRECTED FOR ICE BATH TEMP = 31.4 DEG F
60 GC SAMPLES TAKEN, WAST FACTOR 1.6, CO FACTOR 2.84/28.6

CLOCK TIME	ELAPSED TIME(MIN)	OZONE (PPM)	OXIDANT (PPM)	NO (PPM)	MOZ-PAN (PPM)	NOR-PAN (PPM)	N-C4 (PPM)	HCHO (PPM)	HCHO VOL (L)	O3=NO /NO2	TOT N (PPM)	TOT C (PPM)
1000	0.	0.0	0.015	1.140	0.132	1.260	3.920	0.020	22.00	0.0	1.272	15.711
1015	15.	0.0	0.015	1.086	0.160	0.000	3.750	0.000	0.000	0.0	1.247	0.000
1030	30.	0.0	0.020	1.042	0.191	0.000	3.770	0.000	0.000	0.0	1.234	0.000
1045	45.	0.0	0.025	1.006	0.238	0.000	3.810	0.000	0.000	0.0	1.246	0.000
1100	60.	0.0	0.025	0.941	0.266	0.000	3.710	0.012	30.50	0.0	1.210	15.013
1115	75.	0.0	0.040	0.888	0.310	0.000	3.750	0.000	0.000	0.0	1.202	0.000
1130	90.	0.0	0.040	0.840	0.352	1.192	3.670	0.000	0.000	0.0	1.198	0.000
1145	105.	0.0	0.045	0.790	0.379	1.171	3.640	0.000	0.000	0.0	1.176	0.000
1200	120.	0.002	0.050	0.742	0.421	1.168	3.580	0.000	0.000	0.003	1.171	0.000
1215	135.	0.0	0.055	0.682	0.458	1.142	3.580	0.012	27.00	0.0	1.130	0.000
1230	150.	0.001	0.055	0.642	0.475	1.126	3.520	0.000	0.000	0.001	1.128	0.000
1245	165.	0.002	0.060	0.600	0.500	1.104	3.520	0.000	0.000	0.002	1.112	0.000
1300	180.	0.004	0.065	0.556	0.517	1.069	3.540	0.024	30.00	0.004	1.086	0.000
1315	195.	0.002	0.065	0.518	0.542	1.061	3.440	0.000	0.000	0.002	1.075	0.000
1330	210.	0.003	0.070	0.478	0.566	1.019	3.400	0.000	0.000	0.003	1.040	0.000
1345	225.	0.004	0.075	0.442	0.590	1.038	3.400	0.000	0.000	0.003	1.040	0.000
1400	240.	0.006	0.075	0.410	0.608	1.016	2.8407	0.023	34.00	0.004	1.034	11.948
1415	255.	0.003	0.080	0.370	0.629	0.641	3.300	0.000	0.000	0.002	1.015	0.000
1430	270.	0.005	0.080	0.354	0.635	0.979	3.260	0.000	0.000	0.003	1.006	0.000
1445	285.	0.007	0.085	0.334	0.639	0.966	3.260	0.000	0.000	0.004	0.991	0.000
1500	300.	0.007	0.090	0.290	0.653	0.943	3.180	0.026	34.00	0.003	0.962	13.492
1515	315.	0.008	0.090	0.262	0.667	0.938	3.220	0.000	0.000	0.003	0.948	0.000
1530	330.	0.013	0.090	0.245	0.676	0.918	3.160	0.000	0.000	0.005	0.941	0.000
1545	345.	0.014	0.100	0.216	0.675	0.894	3.100	0.0507	30.00	0.005	0.912	0.000
1600	360.	0.015	0.100	0.194	0.688	0.875	3.050	0.000	0.000	0.004	0.904	12.994

----- NO DATA TAKEN ----- DATA DISCARDED ----- QUESTIONABLE DATA

EC-44 N-BUTANE
EVACUABLE CHAMBER
1974 JUNE 26

AVE SAMPLE TEMP(1) = 86.2
AVE SAMPLE TEMP(2) = 86.4
AVE WALL TEMP(1) = 81.7
AVE WALL TEMP(2) = 82.8
AVE RADOM = 2.23
AVE RH = 46.5
AVE SOLAR SIMULATOR POWER = 18.0

CLOCK TIME	ELAPSED TIME (MIN)	TS1 (DEG F)	TS2 (DEG F)	TW1 (DEG F)	TW2 (DEG F)	REL HUM (%)	SSPOWER (KW)	RADOM (MW)	CO (PPM)	ACETALD (PPM)	PROPALD (PPM)	ACETONE (PPM)	MEK (PPM)	C4-N-2 (PPM)	C4-N-1 (PPM)
1000	0.	83.0	82.9	84.7	83.3	48.0	17.90	2.28	2.79	0.001	0.0	0.003	0.0	0.0	0.0
1015	15.	84.7	87.0	85.2	83.4	47.0	18.80	2.34	2.78	0.000	0.0	0.000	0.0	0.0	0.0
1030	30.	85.2	85.5	79.6	82.9	47.5	17.30	2.15	2.82	0.000	0.0	0.000	0.001	0.0	0.0
1045	45.	84.9	85.2	79.1	82.5	48.5	18.10	2.24	2.83	0.000	0.0	0.000	0.000	0.0	0.0
1100	60.	85.0	85.3	80.5	82.5	48.5	17.70	2.23	2.83	0.017	0.0	0.006	0.024	0.003	0.0
1115	75.	85.4	85.5	81.3	82.4	0.000	18.70	2.24	2.88	0.000	0.0	0.000	0.000	0.000	0.0
1130	90.	85.7	85.7	81.6	82.4	0.000	18.20	2.23	2.91	0.000	0.0	0.000	0.000	0.000	0.0
1145	105.	86.0	86.1	82.0	82.4	0.000	17.00	2.20	2.93	0.000	0.0	0.000	0.000	0.000	0.000
1200	120.	86.3	86.4	82.3	82.5	0.000	17.90	2.18	2.96	0.032	0.0	0.009	0.050	0.007	0.0007
1215	135.	86.9	85.2	78.8	81.7	0.000	17.90	2.19	2.98	0.000	0.0	0.000	0.000	0.000	0.000
1230	150.	85.3	85.5	80.4	81.9	0.000	17.90	2.23	3.01	0.000	0.0	0.000	0.000	0.000	0.000
1245	165.	85.7	86.0	81.2	82.1	0.000	18.00	2.26	3.04	0.000	0.0	0.000	0.000	0.000	0.000
1300	180.	86.1	86.3	81.7	82.2	0.000	18.30	2.28	3.06	0.000	0.0	0.011	0.078	0.011	0.0014
1315	195.	86.3	86.5	82.1	82.6	0.000	17.30	2.16	3.06	0.000	0.0	0.000	0.000	0.000	0.000
1330	210.	86.9	87.2	82.6	82.9	0.000	18.20	2.28	3.08	0.000	0.0	0.000	0.000	0.000	0.000
1345	225.	87.2	87.5	83.0	83.2	0.000	18.20	2.23	3.09	0.000	0.0	0.000	0.000	0.000	0.000
1400	240.	87.5	87.8	83.3	83.5	0.000	18.30	2.24	3.12	0.058	0.0	0.011	0.088	0.013	0.0026
1415	255.	87.4	87.6	81.6	83.0	0.000	18.20	2.20	3.13	0.000	0.0	0.000	0.000	0.014	0.0024
1430	270.	86.5	86.7	80.7	83.0	0.000	18.00	2.20	3.13	0.000	0.0	0.000	0.000	0.000	0.000
1445	285.	86.8	87.0	82.0	83.2	0.000	17.90	2.22	3.16	0.000	0.0	0.000	0.000	0.015	0.0024
1500	300.	87.2	87.4	82.7	83.4	0.000	17.80	2.23	3.18	0.075	0.0	0.017	0.117	0.016	0.0028
1515	315.	87.5	87.7	83.1	83.7	0.000	18.10	2.23	3.18	0.000	0.0	0.000	0.000	0.000	0.000
1530	330.	86.7	87.0	79.9	82.9	0.000	18.20	2.22	3.23	0.000	0.0	0.000	0.000	0.017	0.0028
1545	345.	86.8	87.1	81.5	83.2	0.000	17.90	2.24	3.24	0.000	0.0	0.000	0.000	0.000	0.000
1600	360.	87.1	87.4	82.2	83.4	39.5	18.20	2.23	3.27	0.075	0.0	0.016	0.115	0.018	0.0033

----- NO DATA TAKEN ----- DATA DISCARDED ----- QUESTIONABLE DATA

EC-45 MCHO ADDED
EVACUABLE CHAMBER
1974 JUNE 27

BEGIN IRRADIATION 1030 0.25 INCH PYREX FILTER
2.89 TORR MCHO IN 293.2 ML BULB FLUSHED INTO CHAMBER WITH NITROGEN 0929
PAN CONCENTRATIONS ARE CORRECTED FOR OVERLAP WITH BUTYL NITRATE PEAK
ALL TEMPERATURES CORRECTED FOR ICE BATH TEMP = 31.1 DEG F
59 GC SAMPLES TAKEN, MAST FACTOR 1.6, CO FACTOR 2.84/28.8, PAN CALIBR. 5

CLOCK TIME	ELAPSED TIME(MIN)	OZONE (PPM)	OXIDANT (PPM)	NO (PPM)	NO2-PAN (PPM)	NOX-PAN (PPM)	N-C4 (PPM)	PAN (PPM)	MCHO (PPM)	MCHO VOL (L)	03-MO /M2	TOT N (PPM)	TOT C (PPM)
1030	0.	0.0	0.005	0.552	0.062	0.062	1.940	0.0	0.129	10.00	0.0	0.614	7.912
1045	15.	0.0	0.010	0.530	0.093	0.093	1.920	0.000	0.129	0.000	0.0	0.624	0.000
1100	30.	0.0	0.010	0.504	0.128	0.128	1.900	0.0	0.121	10.00	0.0	0.634	0.000
1115	45.	0.0	0.015	0.444	0.164	0.164	1.870	0.000	0.101	0.000	0.0	0.611	0.000
1130	60.	0.0	0.020	0.396	0.203	0.203	1.840	0.0	0.101	16.00	0.0	0.602	7.588
1145	75.	0.0	0.025	0.346	0.238	0.238	1.830	0.000	0.086	16.00	0.0	0.588	0.000
1200	90.	0.0	0.030	0.302	0.270	0.270	1.810	0.001	0.086	16.00	0.0	0.578	0.000
1215	105.	0.002	0.035	0.259	0.297	0.297	1.770	0.000	0.078	16.00	0.002	0.563	0.000
1230	120.	0.004	0.040	0.222	0.324	0.324	1.760	0.001	0.083	16.00	0.003	0.554	7.355
1245	135.	0.004	0.045	0.190	0.339	0.339	1.680	0.000	0.083	16.00	0.003	0.538	0.000
1300	150.	0.009	0.050	0.158	0.354	0.354	1.720	0.002	0.083	16.00	0.004	0.523	0.000
1315	165.	0.012	0.055	0.133	0.368	0.368	1.720	0.000	0.076	16.00	0.004	0.512	0.000
1330	180.	0.018	0.060	0.108	0.381	0.381	1.700	0.003	0.076	16.00	0.005	0.502	0.000
1345	195.	0.027	0.065	0.094	0.382	0.382	1.640	0.000	0.091	16.00	0.007	0.490	0.000
1400	210.	0.232	0.080	0.078	0.383	0.383	1.650	0.004	0.091	16.00	0.007	0.476	0.000
1415	225.	0.043	0.085	0.070	0.379	0.379	1.620	0.000	0.073	16.00	0.008	0.466	0.000
1430	240.	0.053	0.095	0.058	0.381	0.381	1.620	0.006	0.073	16.00	0.008	0.456	0.000
1445	255.	0.063	0.105	0.049	0.374	0.374	1.600	0.000	0.076	16.00	0.008	0.443	0.000
1500	270.	0.072	0.115	0.041	0.370	0.370	1.590	0.008	0.081	20.00	0.010	0.432	0.000
1515	285.	0.082	0.125	0.036	0.361	0.361	1.570	0.011	0.081	20.00	0.010	0.409	6.853
1530	300.	0.095	0.130	0.034	0.348	0.348	1.570	0.011	0.081	20.00	0.010	0.403	0.000
1545	315.	0.106	0.140	0.034	0.343	0.343	1.550	0.014	0.074	30.00	0.011	0.391	0.000
1600	330.	0.114	0.145	0.032	0.330	0.330	1.540	0.014	0.074	30.00	0.010	0.374	0.000
1615	345.	0.126	0.155	0.026	0.319	0.319	1.520	0.015	0.074	30.00	0.013	0.367	6.617
1630	360.	0.138	0.165	0.029	0.308	0.308	1.500	0.015	0.074	30.00	0.013	0.367	6.617

----- NO DATA TAKEN ----- DATA DISCARDED 7 QUESTIONABLE DATA

EC-45 MCHD ADDED
EVACUABLE CHAMBER
1974 JUNE 27

AVE SAMPLE TEMP(1) = 87.1
AVE SAMPLE TEMP(2) = 86.8
AVE WALL TEMP(1) = 82.1
AVE WALL TEMP(2) = 83.7
AVE RADION = 2.22
AVE RH = 48.0
AVE SOLAR SIMULATOR POWER = 18.0

CLOCK TIME	ELAPSED TIME(MIN)	TS1 (DEG F)	TS2 (DEG F)	TW1 (DEG F)	TW2 (DEG F)	REL HUM (%)	SSPWER (KW)	RADION (MV)	CO (PPH)	ACETALD (PPH)	PROPALD (PPH)	ACETONE (PPH)	MEK (PPH)	C4-N-2 (PPH)	C4-N-1 (PPH)
1030	0.	84.0	84.0	84.6	84.9	51.0	18.80	2.23	3.65	0.002	0.0	0.005	0.001	0.0	0.0
1045	15.	87.9	87.9	84.3	85.0	50.0	18.00	2.32	3.63	0.000	0.000	0.000	0.000	0.000	0.000
1100	30.	86.1	86.2	81.0	84.2	51.5	17.90	2.19	3.66	0.000	0.000	0.000	0.000	0.001	0.000
1115	45.	86.5	86.6	82.0	84.0	51.5	17.90	2.22	3.69	0.000	0.000	0.000	0.000	0.000	0.000
1130	60.	86.8	86.7	82.5	83.8	51.5	17.60	2.14	3.71	0.014	0.0	0.006	0.017	0.003	0.0005
1145	75.	86.9	86.7	81.5	83.6	50.5	17.90	2.24	3.75	0.000	0.000	0.000	0.000	0.000	0.000
1200	90.	86.7	86.6	81.4	83.5	50.5	18.20	2.25	3.77	0.000	0.000	0.000	0.000	0.004	0.0009
1215	105.	87.1	86.9	82.2	83.5	50.0	18.10	2.26	3.80	0.000	0.000	0.000	0.000	0.000	0.000
1230	120.	87.2	87.0	81.9	83.4	49.5	17.90	2.20	3.81	0.024	0.0	0.008	0.034	0.006	0.0009
1245	135.	86.6	86.5	75.8	83.2	0.000	17.90	2.21	3.81	0.000	0.000	0.000	0.000	0.000	0.000
1300	150.	87.0	86.8	81.9	83.4	49.5	17.80	2.19	3.84	0.000	0.000	0.000	0.000	0.007	0.000
1315	165.	87.2	87.0	82.4	83.5	48.5	17.70	2.17	3.86	0.000	0.000	0.000	0.000	0.000	0.000
1330	180.	87.4	87.3	82.7	83.5	48.0	17.60	2.13	3.87	0.000	0.0	0.009	0.046	0.008	0.0014
1345	195.	86.9	86.7	81.0	83.2	48.0	17.80	2.16	3.87	0.000	0.000	0.000	0.000	0.000	0.000
1400	210.	87.4	87.3	82.1	83.5	47.0	18.50	2.31	3.87	0.000	0.000	0.000	0.000	0.009	0.0019
1415	225.	87.6	87.5	82.3	83.5	47.0	17.90	2.21	3.92	0.000	0.000	0.000	0.000	0.000	0.000
1430	240.	87.0	86.9	81.0	83.2	47.0	17.60	2.22	3.93	0.039	0.0	0.014	0.000	0.010	0.0019
1445	255.	87.3	87.2	82.1	83.5	46.5	18.10	2.23	3.93	0.000	0.000	0.000	0.000	0.000	0.000
1500	270.	87.8	87.5	82.8	83.8	46.0	18.10	2.23	3.94	0.000	0.000	0.000	0.000	0.011	0.0024
1515	285.	88.1	87.9	83.2	83.9	45.0	18.00	2.21	4.07	0.000	0.000	0.000	0.000	0.000	0.000
1530	300.	87.1	83.0	80.4	83.2	45.0	18.10	2.25	3.95	0.046	0.0	0.018	0.067	0.012	0.0024
1545	315.	87.4	87.3	82.0	83.6	45.0	18.00	2.21	4.03	0.000	0.000	0.000	0.000	0.000	0.000
1600	330.	87.8	87.7	82.8	83.8	44.5	17.80	2.21	4.03	0.000	0.000	0.000	0.000	0.012	0.0024
1615	345.	87.9	87.8	82.5	83.7	44.0	18.10	2.21	4.03	0.000	0.000	0.000	0.000	0.000	0.000
1630	360.	87.3	87.1	81.0	83.5	44.5	18.30	2.22	4.03	0.056	0.0	0.020	0.070	0.013	0.0024

7 QUESTIONABLE DATA

DATA DISCARDED

NO DATA TAKEN

EC-46 N-BUTANE
EVACUABLE CHAMBER
1976 JULY 1

BEGIN IRRADIATION 1100 0.25 INCH PYREX FILTER
PAN CONCENTRATIONS ARE CORRECTED FOR OVERLAP WITH BUTYL NITRATE PEAK
ALL TEMPERATURES CORRECTED FOR ICE BATH TEMP = 30.9 DEG F
59 GC SAMPLES TAKEN, MAST FACTOR 1.6, CO FACTOR 2.84/27.6, PAN CALIBR. 6

CLOCK TIME	ELAPSED TIME(MIN)	OZONE (PPM)	OXIDANT (PPM)	NO (PPM)	NO2-PAN (PPM)	NOX-PAN (PPM)	N-C4 (PPM)	PAN (PPM)	HCNO (PPM)	HCNO VOL (L)	03/NO2 /NO2	TOT N (PPM)	TOT C (PPM)
1100	0.	0.0	0.010	0.527	0.061	0.587	3.990	0.0	0.013	28.00	0.0	0.588	15.997
1115	15.	0.002	0.015	0.456	0.121	0.577	3.970	0.000	0.000	0.000	0.009	0.578	0.000
1130	30.	0.002	0.025	0.382	0.186	0.570	3.830	0.000	0.000	0.000	0.003	0.571	0.000
1145	45.	0.005	0.040	0.312	0.239	0.557	3.820	0.000	0.000	0.000	0.006	0.558	0.000
1200	60.	0.008	0.045	0.247	0.290	0.539	3.800	0.002	0.002	33.00	0.007	0.547	15.402
1215	75.	0.011	0.060	0.192	0.325	0.516	3.780	0.000	0.000	0.000	0.007	0.530	0.000
1230	90.	0.017	0.065	0.145	0.357	0.501	3.700	0.004	0.004	0.000	0.007	0.518	0.000
1245	105.	0.027	0.080	0.110	0.377	0.436	3.5207	0.000	0.000	0.000	0.008	0.508	0.000
1300	120.	0.038	0.090	0.076	0.395	0.470	3.600	0.009	0.027	30.00	0.007	0.496	14.977
1315	135.	0.053	0.105	0.070	0.390	0.455	3.590	0.000	0.000	0.000	0.009	0.486	0.000
1330	150.	0.067	0.115	0.049	0.393	0.441	3.570	0.012	0.000	0.000	0.008	0.472	0.000
1345	165.	0.083	0.130	0.038	0.384	0.423	3.560	0.000	0.000	0.000	0.008	0.456	0.000
1400	180.	0.090	0.140	0.037	0.372	0.408	3.540	0.017	0.020	34.00	0.009	0.446	14.849
1415	195.	0.113	0.150	0.024	0.367	0.393	3.440	0.000	0.000	0.000	0.008	0.433	0.000
1430	210.	0.139	0.165	0.031	0.353	0.380	3.420	0.022	0.000	0.000	0.011	0.426	0.000
1445	225.	0.142	0.175	0.026	0.339	0.363	3.360	0.029	0.021	34.00	0.011	0.413	0.000
1500	240.	0.154	0.180	0.024	0.325	0.346	3.340	0.000	0.000	0.000	0.011	0.402	14.371
1515	255.	0.166	0.195	0.022	0.315	0.334	3.310	0.034	0.000	0.000	0.014	0.392	0.000
1530	270.	0.180	0.205	0.023	0.301	0.323	3.230	0.000	0.000	0.000	0.013	0.383	0.000
1545	285.	0.191	0.215	0.019	0.287	0.307	3.210	0.000	0.000	0.000	0.013	0.368	0.000
1600	300.	0.203	0.230	0.018	0.280	0.294	3.230	0.040	0.026	34.00	0.013	0.364	13.965
1615	315.	0.218	0.235	0.014	0.263	0.276	3.200	0.000	0.000	0.000	0.015	0.347	0.000
1630	330.	0.229	0.245	0.017	0.248	0.262	3.190	0.067	0.000	0.000	0.015	0.338	0.000
1645	345.	0.239	0.255	0.014	0.231	0.245	3.180	0.000	0.040	20.00	0.015	0.324	0.000
1700	360.	0.252	0.260	0.012	0.214	0.226	3.180	0.056	0.000	0.000	0.014	0.311	13.879

----- NO DATA TAKEN ----- DATA DISCARDED 7 QUESTIONABLE DATA

EC-46 N-BUTANE
EVACUABLE CHAMBER
1974 JULY 1

AVE SAMPLE TEMP(1) = 87.4
AVE SAMPLE TEMP(2) = 86.8
AVE WALL TEMP(1) = 82.1
AVE WALL TEMP(2) = 83.5
AVE RADOM = 2.22
AVE PH = 43.0
AVE SOLAR SIMULATOR POWER = 18.4

CLOCK TIME	ELAPSED TIME(MIN)	YS1 (DEG F)	YS2 (DEG F)	YM1 (DEG F)	YM2 (DEG F)	REL HUM (%)	SSPOWER (KW)	RADOM (MV)	CO (PPM)
1100	0.	81.9	83.9	84.3	84.7	45.5	17.50	2.20	2.00
1115	15.	88.5	87.9	86.9	85.2	44.5	17.50	2.18	2.00
1130	30.	87.6	87.0	81.8	84.7	44.0	18.00	2.24	1.98
1145	45.	86.9	86.4	81.9	84.2	45.0	18.00	2.20	2.06
1200	60.	86.6	86.1	80.9	83.7	45.0	18.10	2.18	2.07
1215	75.	87.1	86.3	81.8	83.6	45.5	18.20	2.24	2.05
1230	90.	87.4	86.5	82.3	83.5	45.0	18.20	2.17	2.14
1245	105.	87.7	86.8	82.7	83.5	44.5	18.10	2.21	2.15
1300	120.	87.9	87.0	83.0	83.6	43.5	18.00	2.16	2.17
1315	135.	86.9	86.2	79.7	82.7	43.5	17.90	2.18	2.18
1330	150.	87.2	86.4	81.1	82.9	44.0	18.70	2.23	2.23
1345	165.	87.5	86.7	81.9	83.0	43.5	18.70	2.23	2.26
1400	180.	87.7	87.0	82.4	83.2	43.0	18.30	2.22	2.21
1415	195.	87.8	87.2	82.1	83.0	42.5	18.30	2.18	2.29
1430	210.	87.0	86.4	79.9	82.6	42.5	19.10	2.26	2.32
1445	225.	87.1	86.4	80.4	82.7	42.5	19.20	2.31	2.37
1500	240.	87.3	86.5	81.5	82.9	42.5	18.70	2.23	2.37
1515	255.	87.6	86.9	82.1	83.1	42.0	18.70	2.22	2.39
1530	270.	88.1	87.4	82.5	83.3	41.0	19.40	2.30	2.41
1545	285.	89.1	87.5	82.9	83.5	40.5	18.20	2.16	2.42
1600	300.	88.4	87.8	83.3	83.7	39.5	18.30	2.20	2.45
1615	315.	87.5	86.8	79.8	82.8	40.0	18.60	2.20	2.48
1630	330.	87.7	87.0	81.4	83.2	40.0	18.40	2.22	2.50
1645	345.	88.0	87.3	82.2	83.4	40.0	18.70	2.21	2.53
1700	360.	88.4	87.6	82.7	83.6	39.5	18.70	2.23	2.53

***** NO DATA TAKEN ----- DATA DISCARDED 7 QUESTIONABLE DATA

EC-46 N-BUTANE
EVACUABLE CHAMBER
1974 JULY 1

CLOCK TIME	ELAPSED TIME(MIN)	ACETALD (PPM)	PROPALD (PPM)	BUTYRAL (PPM)	ACETONE (PPM)	MEK (PPM)	C1-N (PPM)	C2-N (PPM)	C4-N-2 (PPM)	C4-N-1 (PPM)
1100	0.	0.002	0.0010	0.0010	0.003	0.001	0.0	0.0	0.0	0.0
1115	15.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1130	30.	0.032	0.000	0.0020	0.005	0.026	0.0002	0.0004	0.003	0.0000
1145	45.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1200	60.	0.065	0.0	0.0020	0.008	0.050	0.0002	0.0004	0.007	0.0009
1215	75.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1230	90.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1245	105.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1300	120.	0.0667	0.0010	0.00207	0.0077	0.0787	0.0004	0.0007	0.013	0.0011
1315	135.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1330	150.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1345	165.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1400	180.	0.082	0.0010	0.0020	0.010	0.0887	0.0005	0.0009	0.016	0.0028
1415	195.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1430	210.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1445	225.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1500	240.	0.092	0.0040	0.0030	0.014	0.128	0.0007	0.0011	0.018	0.0032
1515	255.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1530	270.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1545	285.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1600	300.	0.099	0.0030	0.0040	0.019	0.141	0.0007	0.0014	0.020	0.0040
1615	315.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1630	330.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1645	345.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1700	360.	0.108	0.0040	0.0040	0.022	0.147	0.0009	0.0016	0.022	0.0040

----- NO DATA TAKEN ----- DATA DISCARDED 7 QUESTIONABLE DATA

EC-47 N-BUTANE
EVACUABLE CHAMBER
1974 JULY 2

BEGIN IRRADIATION 0930 0.25 INCH PYREX FILTER
PAN CONCENTRATIONS ARE CORRECTED FOR OVERLAP WITH BUTYL NITRATE PEAK
ALL TEMPERATURES CORRECTED FOR ICE BATH TEMP = 30.9 DEG F
59 GC SAMPLES TAKEN, MAST FACTOR 1.6, CO FACTOR 2.84/28.6, PAN CALIBR. 6

CLOCK TIME	ELAPSED TIME(MIN)	COZONE (PPM)	OXIDANT (PPM)	NO (PPM)	NO2-PAN (PPM)	NOX-PAN (PPM)	N-C4 (PPM)	PAN (PPM)	HCMD (PPM)	HCMD VOL (L)	Q3=ND /N22	TOT N (PPM)	TOT C (PPM)
930	0.	0.0	0.010	0.534	0.062	0.599	3.900	0.0	0.0	13.00	0.0	0.596	13.624
945	15.	0.0	0.010	0.497	0.092	0.592	3.890	0.0	0.0	0.000	0.0	0.590	0.000
1000	30.	0.0	0.015	0.456	0.128	0.585	3.880	0.0	0.0	24.00	0.0	0.587	15.649
1015	45.	0.0	0.015	0.410	0.164	0.574	3.830	0.0	0.0	0.000	0.0	0.578	0.000
1030	60.	0.0	0.025	0.358	0.211	0.448	3.790	0.0	0.0	0.000	0.0	0.574	0.000
1045	75.	0.001	0.030	0.312	0.244	0.556	3.740	0.002	0.0	0.000	0.001	0.564	0.000
1100	90.	0.002	0.035	0.264	0.276	0.542	3.660	0.003	0.0	0.000	0.002	0.551	0.000
1115	105.	0.005	0.040	0.218	0.311	0.529	3.600	0.003	0.0	0.000	0.003	0.541	0.000
1130	120.	0.010	0.050	0.180	0.334	0.514	3.600	0.005	0.002	0.000	0.003	0.528	0.000
1145	135.	0.012	0.060	0.146	0.356	0.502	3.570	0.005	0.002	0.000	0.003	0.518	0.000
1200	150.	0.018	0.065	0.118	0.368	0.485	3.560	0.008	0.000	0.000	0.006	0.504	0.000
1215	165.	0.029	0.075	0.094	0.377	0.471	3.540	0.008	0.000	0.000	0.007	0.492	0.000
1230	180.	0.038	0.090	0.073	0.385	0.460	3.500	0.012	0.017	0.000	0.007	0.476	0.000
1245	195.	0.053	0.100	0.060	0.389	0.450	3.400	0.016	0.016	0.000	0.008	0.467	0.000
1300	210.	0.065	0.110	0.050	0.386	0.435	3.400	0.023	0.013	0.000	0.009	0.456	0.000
1315	225.	0.077	0.115	0.046	0.377	0.422	3.370	0.026	0.016	0.000	0.010	0.444	0.000
1330	240.	0.091	0.130	0.038	0.370	0.408	3.360	0.026	0.016	0.000	0.012	0.432	0.000
1345	255.	0.106	0.140	0.035	0.358	0.392	3.320	0.026	0.016	0.000	0.014	0.410	0.000
1400	270.	0.121	0.150	0.034	0.345	0.376	3.320	0.026	0.016	0.000	0.014	0.389	0.000
1415	285.	0.136	0.160	0.029	0.335	0.364	3.280	0.033	0.015	0.000	0.015	0.370	0.000
1430	300.	0.148	0.170	0.026	0.322	0.347	3.240	0.039	0.015	0.000	0.015	0.358	0.000
1445	315.	0.159	0.180	0.024	0.310	0.332	3.210	0.054	0.015	0.000	0.024	0.310	0.000
1500	330.	0.170	0.185	0.024	0.294	0.308	3.160	0.061	0.015	0.000	0.030	0.293	0.000
1515	345.	0.178	0.195	0.022	0.273	0.294	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1530	360.	0.189	0.205	0.022	0.250	0.228	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1630	420.	0.233	0.230	0.022	0.207	0.209	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1700	450.	0.255	0.250	0.022	0.183	0.209	0.000	0.000	0.000	0.000	0.000	0.000	0.000

----- NO DATA TAKEN ----- DATA DISCARDED ----- QUESTIONABLE DATA

EC-47 N-BUTANE
EVACUABLE CHAMBER
1974 JULY 2

AVE SAMPLE TEMP(1) = 86.3
AVE SAMPLE TEMP(2) = 86.3
AVE WALL TEMP(1) = 81.2
AVE WALL TEMP(2) = 83.0
AVE RADOM = 2.23
AVE RH = 49.0
AVE SOLAR SIMULATOR POWER = 18.6

CLOCK TIME	ELAPSED TIME(MIN)	TS1 (DEG F)	TS2 (DEG F)	TM1 (DEG F)	TM2 (DEG F)	REL HUM (%)	SSPOWER (KW)	RADIOM (MV)	CO (PPH)
930	0.	84.5	84.5	86.8	85.6	48.5	17.60	2.21	1.97
945	15.	86.0	86.2	80.4	84.5	50.0	17.80	2.20	1.98
1000	30.	85.2	85.5	85.2	85.5	51.5	17.80	2.16	1.98
1015	45.	85.1	85.3	79.3	83.1	53.0	18.60	2.26	2.00
1030	60.	85.4	85.4	80.0	82.9	53.5	18.50	2.21	2.02
1045	75.	85.7	85.6	80.8	82.7	53.0	18.20	2.19	2.05
1100	90.	86.1	86.0	81.4	82.6	52.5	18.60	2.22	2.06
1115	105.	86.3	86.3	81.8	82.6	51.5	18.60	2.22	2.09
1130	120.	86.6	86.5	82.1	82.7	50.5	18.60	2.20	2.11
1145	135.	86.9	86.8	82.5	82.9	49.5	18.40	2.19	2.12
1200	150.	87.3	87.2	82.8	83.0	48.5	18.40	2.21	2.16
1215	165.	87.6	87.6	83.1	83.2	48.0	18.60	2.25	2.16
1230	180.	87.9	87.9	83.4	83.5	47.0	18.50	2.26	2.17
1245	195.	87.1	87.1	80.1	83.0	47.0	18.60	2.21	2.19
1300	210.	86.8	86.9	80.3	83.0	47.5	18.50	2.20	2.20
1315	225.	86.8	86.8	81.0	83.1	48.0	18.70	2.20	2.22
1330	240.	87.1	87.3	81.9	83.2	47.5	18.80	2.23	2.27
1345	255.	87.4	87.5	82.9	83.4	47.0	18.70	2.21	2.28
1400	270.	87.7	87.9	82.9	83.7	46.0	19.10	2.26	2.30
1415	285.	86.6	86.6	78.9	82.1	46.0	18.90	2.26	2.34
1430	300.	85.7	85.7	78.0	82.0	48.5	18.80	2.24	2.34
1445	315.	85.1	85.1	77.5	81.5	50.0	19.20	2.24	2.37
1500	330.	84.9	84.9	77.8	81.2	51.0	19.30	2.30	2.38
1515	345.	85.3	85.1	79.2	81.4	51.0	18.60	2.25	2.38
1530	360.	85.6	85.6	80.1	81.5	50.5	19.30	2.27	2.43
1630	420.	85.6	85.6	80.1	81.5	46.5	18.80	2.24	2.50
1700	450.	85.6	85.6	80.1	81.5	45.0	18.70	2.27	2.53

***** NO DATA TAKEN

----- DATA DISCARDED

***** QUESTIONABLE DATA

EC-47 N-BUTANE
EVACUABLE CHAMBER
1974 JULY 2

CLOCK TIME	ELAPSED TIME(MINI)	ACETALD (PPM)	PROPALD (PPM)	BUTYRAL (PPM)	ACETONE (PPM)	MEK (PPM)	CI-N (PPM)	C2-N (PPM)	C4-N-2 (PPM)	C4-N-1 (PPM)
930	0.	0.002	0.0010	0.0010	0.003	0.001	0.0	0.0	0.0	0.0
945	15.	0.000	0.000	0.000	0.000	0.000	0.0	0.0	0.0	0.0
1000	30.	0.021	0.0010	0.0010	0.006	0.013	0.0	0.0	0.002	0.0002
1015	45.	0.000	0.000	0.000	0.000	0.000	0.0	0.0	0.000	0.000
1030	60.	0.047	0.0010	0.0020	0.008	0.032	0.0	0.0004	0.005	0.0006
1045	75.	0.000	0.000	0.000	0.000	0.000	0.0	0.0005	0.007	0.0011
1100	90.	0.000	0.000	0.000	0.000	0.000	0.0	0.0005	0.007	0.0011
1115	105.	0.000	0.000	0.000	0.000	0.000	0.0002	0.0007	0.009	0.0013
1130	120.	0.045	0.0	0.0020	0.006	0.054	0.0004	0.0007	0.011	0.0015
1145	135.	0.000	0.000	0.000	0.000	0.000	0.0004	0.0007	0.011	0.0015
1200	150.	0.000	0.000	0.000	0.000	0.000	0.0004	0.0007	0.011	0.0015
1215	165.	0.000	0.000	0.000	0.000	0.000	0.0004	0.0007	0.011	0.0015
1230	180.	0.067	0.0010	0.0020	0.010	0.000	0.0004	0.0007	0.013	0.0017
1245	195.	0.000	0.000	0.000	0.000	0.000	0.0005	0.0009	0.014	0.0023
1300	210.	0.000	0.000	0.000	0.000	0.000	0.0005	0.0009	0.015	0.0023
1315	225.	0.000	0.000	0.000	0.000	0.000	0.0005	0.0009	0.015	0.0023
1330	240.	0.000	0.000	0.0030	0.000	0.000	0.0005	0.0011	0.017	0.0023
1345	255.	0.000	0.000	0.000	0.000	0.000	0.0005	0.0011	0.017	0.0023
1400	270.	0.000	0.000	0.000	0.000	0.000	0.0007	0.0011	0.018	0.0029
1415	285.	0.081	0.0040	0.0040	0.016	0.118	0.0007	0.0011	0.019	0.0023
1430	300.	0.000	0.000	0.000	0.000	0.000	0.0007	0.0011	0.020	0.0023
1445	315.	0.000	0.000	0.000	0.000	0.000	0.0007	0.0011	0.020	0.0023
1500	330.	0.000	0.000	0.000	0.000	0.000	0.0007	0.0011	0.020	0.0023
1515	345.	0.000	0.000	0.000	0.000	0.000	0.0007	0.0011	0.020	0.0023
1530	360.	0.082	0.0040	0.0040	0.019	0.128	0.0007	0.0011	0.022	0.0026
1630	420.	0.000	0.000	0.000	0.000	0.000	0.0007	0.0014	0.023	0.0026
1700	450.	0.000	0.000	0.000	0.000	0.000	0.0007	0.0014	0.023	0.0026

7 QUESTIONABLE DATA

DATA DISCARDED

NO DATA TAKEN

EC-48 ACETALC ADDED
EVACUABLE CHAMBER
1974 JULY 3

BEGIN IRRADIATION 1045 0.25 INCH PYREX FILTER
4.1 TORR ACETALCEMYDE IN 293.2 ML BULB FLUSHED INTO CHAMBER
WITH NITROGEN AT 0903
PAN CONCENTRATIONS ARE CORRECTED FOR OVERLAP WITH BUTYL NITRATE PEAK
ALL TEMPERATURES CORRECTED FOR ICE BATH TEMP = 30.3 DEG F
73 GC SAMPLES TAKEN, NAST FACTOR 1.6, CO FACTOR 2.84/29, PAN CALIBR. 6

CLOCK TIME	ELAPSED TIME(MIN)	OZONE (PPM)	OXIDANT (PPM)	NO (PPM)	NO2-PAN (PPM)	NOX-PAN (PPM)	N-C4 (PPM)	PAN (PPM)	HCHO (PPM)	HCHO VOL (L)	03*NO /NO2	TOT N (PPM)	TOT C (PPM)
922	-83-	0.0000	0.0000	0.535	0.059	0.594	1.940	0.0	0.0	30.00	0.0	0.594	8.036
1045	0-	0.0	0.055	0.491	0.105	0.596	1.920	0.002	0.0	30.00	0.0	0.598	8.036
1100	15-	0.0	0.0	0.432	0.151	0.585	1.920	0.002	0.0	30.00	0.0	0.586	8.036
1115	30-	0.0	0.0	0.374	0.199	0.573	1.890	0.004	0.0	30.00	0.0	0.578	8.036
1130	45-	0.0	0.0	0.314	0.245	0.559	1.870	0.004	0.0	30.00	0.0	0.566	8.077
1145	60-	0.0	0.002	0.266	0.277	0.551	1.860	0.008	0.002	30.00	0.002	0.554	8.036
1200	75-	0.004	0.008	0.222	0.309	0.531	1.860	0.008	0.003	30.00	0.003	0.545	8.036
1215	90-	0.008	0.013	0.184	0.335	0.519	1.840	0.013	0.004	30.00	0.004	0.536	8.036
1230	105-	0.013	0.018	0.146	0.350	0.498	1.820	0.013	0.005	30.00	0.005	0.518	7.905
1245	120-	0.018	0.024	0.124	0.360	0.482	1.800	0.018	0.006	30.00	0.006	0.509	8.036
1300	135-	0.024	0.034	0.102	0.367	0.467	1.770	0.018	0.007	30.00	0.007	0.498	8.036
1315	150-	0.034	0.045	0.084	0.373	0.454	1.740	0.024	0.008	30.00	0.008	0.490	8.036
1330	165-	0.045	0.052	0.072	0.375	0.443	1.740	0.024	0.009	30.00	0.009	0.482	8.036
1345	180-	0.052	0.064	0.058	0.369	0.425	1.740	0.034	0.009	30.00	0.009	0.468	8.036
1400	195-	0.064	0.075	0.050	0.358	0.406	1.730	0.034	0.010	30.00	0.010	0.456	8.036
1415	210-	0.075	0.086	0.048	0.347	0.392	1.720	0.041	0.010	30.00	0.010	0.446	8.036
1430	225-	0.086	0.096	0.036	0.340	0.376	1.670	0.041	0.011	30.00	0.011	0.433	8.036
1445	240-	0.096	0.105	0.036	0.326	0.362	1.670	0.046	0.012	30.00	0.012	0.420	8.036
1500	255-	0.105	0.114	0.034	0.306	0.340	1.630	0.056	0.012	30.00	0.012	0.410	8.036
1515	270-	0.114	0.126	0.031	0.295	0.320	1.560	0.056	0.013	30.00	0.013	0.397	7.191
1530	285-	0.126	0.137	0.025	0.283	0.307	1.590	0.061	0.015	30.00	0.015	0.383	8.036
1545	300-	0.137	0.144	0.028	0.285	0.290	1.600	0.061	0.015	30.00	0.015	0.370	8.036
1600	315-	0.144	0.155	0.026	0.231	0.273	1.580	0.072	0.018	30.00	0.018	0.361	8.036
1615	330-	0.155	0.163	0.026	0.235	0.256	1.580	0.072	0.018	30.00	0.018	0.350	8.036
1630	345-	0.163	0.090	0.026	0.235	0.256	1.580	0.072	0.018	30.00	0.018	0.350	8.036
1645	360-	0.163	0.090	0.026	0.235	0.256	1.580	0.072	0.018	30.00	0.018	0.350	8.036

----- NO DATA TAKEN ----- DATA DISCARDED 7 QUESTIONABLE DATA

EC-48 ACETALD ADDED
EVACUABLE CHAMBER
1974 JULY 3

AVE SAMPLE TEMP(1) = 85.7
AVE SAMPLE TEMP(2) = 85.9
AVE WALL TEMP(1) = 80.5
AVE WALL TEMP(2) = 81.9
AVE RADION = 2.22
AVE RH = 54.0
AVE SOLAR SIMULATOR POWER = 18.7

CLOCK TIME	ELAPSED TIME (MIN)	TS1 (DEG F)	TS2 (DEG F)	TW1 (DEG F)	TW2 (DEG F)	REL HUM (%)	SSPOWER (KW)	RADION (MV)	CO (PPM)
922	-83.	84.7	84.8	88.0	85.4	51.0	18.80	2.24	2.00
1045	0.	86.1	86.4	79.4	83.6	52.0	18.30	2.24	2.02
1100	15.	83.6	83.8	78.0	81.2	58.0	18.70	2.24	2.03
1115	30.	84.6	84.7	79.7	81.1	60.0	18.30	2.20	2.03
1130	45.	85.0	85.0	80.3	81.2	59.5	18.50	2.18	2.06
1145	60.	85.3	85.2	80.8	81.3	59.0	18.50	2.17	2.06
1200	75.	85.7	85.6	81.2	81.4	57.5	18.20	2.14	2.08
1215	90.	85.9	85.8	81.6	81.7	57.0	18.20	2.12	2.09
1230	105.	86.5	86.6	81.9	81.9	55.5	18.90	2.25	2.14
1245	120.	86.9	87.0	82.3	82.2	54.0	18.70	2.25	2.15
1300	135.	86.4	86.5	75.8	82.0	53.0	18.80	2.22	2.15
1315	150.	86.6	86.8	81.1	82.3	53.0	18.80	2.22	2.17
1330	165.	86.1	86.2	79.5	81.9	53.0	19.10	2.28	2.18
1345	180.	86.3	86.4	80.6	82.2	52.0	19.20	2.24	2.22
1400	195.	86.4	86.6	81.3	82.4	52.0	18.60	2.18	2.24
1415	210.	86.5	86.7	80.6	82.0	51.5	19.30	2.27	2.25
1430	225.	85.2	85.3	77.5	81.2	53.0	18.80	2.22	2.26
1445	240.	85.4	85.6	79.2	81.5	53.5	18.80	2.22	2.27
1500	255.	85.8	86.0	80.3	81.7	53.0	18.80	2.22	2.31
1515	270.	86.1	86.3	80.9	81.9	52.0	18.80	2.22	2.34
1530	285.	86.4	86.5	81.1	82.0	51.0	18.80	2.20	2.34
1545	300.	85.5	85.7	78.8	81.4	51.5	18.40	2.23	2.36
1600	315.	85.9	86.2	80.2	81.7	51.5	19.00	2.22	2.38
1615	330.	85.4	85.7	78.6	81.1	51.5	19.00	2.25	2.41
1630	345.	85.4	85.6	78.9	81.2	52.0	19.20	2.25	2.44
1645	360.								

----- NO DATA TAKEN ----- DATA DISCARDED ----- 7 QUESTIONABLE DATA

EC-48 ACETALD ADDED
EVACUABLE CHAMBER
1974 JULY 3

CLOCK TIME	ELAPSED TIME (MIN)	ACETALD (PPM)	PROPALD (PPM)	BUTYRAL (PPM)	ACETONE (PPM)	MEK (PPM)	C1-N (PPM)	C2-N (PPM)	C4-N-2 (PPM)	C4-N-1 (PPM)
922	-93.	0.245	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1045	0.	0.1237	0.0	0.0010	0.004	0.001	0.0	0.0	0.0	0.0
1100	15.	0.235	0.0	0.0	0.008	0.005	0.000	0.000	0.000	0.000
1115	30.	0.251	0.0	0.0010	0.009	0.010	0.0	0.0	0.001	0.0
1130	45.	0.251	0.0	0.0010	0.010	0.016	0.000	0.000	0.000	0.000
1145	60.	0.229	0.0010	0.0010	0.010	0.020	0.0	0.0	0.003	0.0006
1200	75.	0.256	0.0020	0.0020	0.011	0.026	0.000	0.000	0.000	0.000
1215	90.	0.237	0.0020	0.0020	0.016	0.033	0.0004	0.0	0.005	0.0009
1230	105.	0.222	0.0010	0.0020	0.012	0.035	0.000	0.000	0.000	0.000
1245	120.	0.184	0.0020	0.0020	0.013	0.034	0.0007	0.0	0.004	0.0015
1300	135.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1315	150.	0.176	0.000	0.0020	0.016	0.040	0.0011	0.0004	0.007	0.0017
1330	165.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1345	180.	0.000	0.000	0.000	0.000	0.000	0.0011	0.0004	0.008	0.0019
1400	195.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1415	210.	0.176	0.0020	0.0030	0.014	0.051	0.0011	0.0004	0.010	0.0023
1430	225.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1445	240.	0.179	0.000	0.0020	0.020	0.042	0.0011	0.0004	0.010	0.0023
1500	255.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1515	270.	0.000	0.000	0.000	0.000	0.000	0.0014	0.0004	0.010	0.0028
1530	285.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1545	300.	0.172	0.0030	0.0030	0.027	0.078	0.0014	0.0004	0.011	0.0028
1600	315.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1615	330.	0.000	0.000	0.000	0.000	0.000	0.0014	0.0004	0.011	0.0031
1630	345.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1645	360.	0.228	0.000	0.0030	0.034	0.084	0.0014	0.0004	0.012	0.0034

----- NO DATA TAKEN ----- DATA DISCARDED ? QUESTIONABLE DATA

EC-49 N-BUTANE
EVACUABLE CHAMBER
1976 JULY 8

BEGIN IRRADIATION 1200 0.25 INCH PYREX FILTER
CHAMBER PUMPED DOWN FOR 45 HOURS AFTER EC-48
PAN CONCENTRATIONS ARE CORRECTED FOR OVERLAP WITH BUTYL NITRATE PEAK
ALL TEMPERATURES CORRECTED FOR ICE BATH TEMP = 31.0 DEG F
TO GC SAMPLES TAKEN, MAST FACTOR 1.6, CD FACTOR 2.84/27.7 PAN CALIBR. 6

CLOCK TIME	ELAPSED TIME(MIN)	OZONE (PPM)	OXIDANT (PPM)	NO (PPM)	NO2-PAN (PPM)	NOX-PAN (PPM)	N-C4 (PPM)	PAN (PPM)	HCHO (PPM)	HCHO VOL (L)	03-NO /NO2	TOT N (PPM)	TOT C (PPM)
1200	0.	0.0	0.015	0.553	0.059	0.611	4.120	0.0	0.0	33.00	0.0	0.412	14.509
1215	15.	0.001	0.020	0.475	0.105	0.586	4.040	0.000	0.000	0.000	0.004	0.586	0.000
1230	30.	0.002	0.025	0.442	0.204	0.646	4.010	0.0	0.0	0.000	0.003	0.650	0.000
1245	45.	0.006	0.025	0.359	0.288	0.646	3.940	0.000	0.000	0.000	0.007	0.656	0.000
1300	60.	0.010	0.030	0.254	0.356	0.612	3.830	0.003	0.0	34.00	0.007	0.626	15.677
1315	75.	0.012	0.035	0.191	0.398	0.597	3.810	0.000	0.000	0.000	0.006	0.610	0.000
1330	90.	0.022	0.040	0.133	0.436	0.572	3.780	0.009	0.000	0.000	0.007	0.595	0.000
1345	105.	0.038	0.040	0.094	0.449	0.543	3.740	0.000	0.000	0.000	0.008	0.576	0.000
1400	120.	0.054	0.045	0.065	0.449	0.514	3.640	0.017	0.0	32.00	0.008	0.554	0.000
1415	135.	0.077	0.045	0.049	0.436	0.485	3.620	0.000	0.000	0.000	0.009	0.530	0.000
1430	150.	0.096	0.050	0.038	0.429	0.469	3.560	0.026	0.000	0.000	0.011	0.503	0.000
1445	165.	0.115	0.050	0.037	0.408	0.444	3.550	0.000	0.000	0.000	0.010	0.485	15.286
1500	180.	0.134	0.040	0.034	0.387	0.418	3.520	0.037	0.004	33.00	0.012	0.458	0.000
1515	195.	0.150	0.045	0.025	0.364	0.386	3.480	0.046	0.000	0.000	0.011	0.450	0.000
1530	210.	0.163	0.110	0.024	0.351	0.375	3.440	0.046	0.000	0.000	0.014	0.433	0.000
1545	225.	0.177	0.075	0.025	0.327	0.350	3.440	0.000	0.000	0.000	0.012	0.415	14.902
1600	240.	0.188	0.075	0.019	0.309	0.326	3.400	0.056	0.023	34.00	0.014	0.364	0.000
1615	255.	0.205	0.080	0.018	0.254	0.269	3.380	0.000	0.000	0.000	0.013	0.346	0.000
1630	270.	0.215	0.080	0.014	0.236	0.250	3.370	0.064	0.000	0.000	0.015	0.338	0.000
1645	285.	0.230	0.085	0.014	0.224	0.237	3.320	0.000	0.000	0.000	0.016	0.316	14.677
1700	300.	0.239	0.085	0.013	0.197	0.209	3.310	0.072	0.013	34.00	0.020	0.305	0.000
1715	315.	0.252	0.090	0.014	0.182	0.195	3.250	0.000	0.000	0.000	0.021	0.282	0.000
1730	330.	0.263	0.090	0.013	0.166	0.178	3.240	0.078	0.000	0.000	0.004	0.281	0.000
1745	345.	0.278	0.095	0.002	0.159	0.162	3.220	0.000	0.020	30.00	0.023	0.272	14.355
1800	360.	0.284	0.100	0.011	0.135	0.143	3.200	0.090	0.000	0.000			

----- NO DATA TAKEN ----- DATA DISCARDED 7 QUESTIONABLE DATA

EC-49 N-BUTANE
EVACUABLE CHAMBER
1974 JULY 8

AVE SAMPLE TEMP(1) = 85.8
AVE SAMPLE TEMP(2) = 86.2
AVE WALL TEMP(1) = 81.3
AVE WALL TEMP(2) = 82.6
AVE RADION = 2.24
AVE PH = 49.0
AVE SOLAR SIMULATOR POWER = 18.9

CLOCK TIME	ELAPSED TIME(MIN)	TS1 (DEG F)	TS2 (DEG F)	TW1 (DEG F)	TW2 (DEG F)	REL HUM (%)	SSPOWER (KW)	RADION (MV)	CO (PPM)
1200	0.	85.1	84.8	81.6	85.7	48.5	19.10	2.25	1.98
1215	15.	87.9	88.3	85.1	85.6	47.5	18.70	2.25	2.00
1230	30.	86.1	86.7	86.1	86.7	49.0	18.70	2.23	2.03
1245	45.	85.7	86.2	86.8	83.9	50.5	18.70	2.20	2.06
1300	60.	85.6	86.1	86.3	83.4	51.0	18.80	2.22	2.05
1315	75.	85.9	86.2	83.3	81.3	51.5	18.70	2.19	2.06
1330	90.	85.9	86.2	80.4	82.8	51.0	18.40	2.19	2.08
1345	105.	85.1	85.5	78.5	82.7	52.0	18.40	2.22	2.10
1400	120.	85.4	85.7	80.5	82.2	52.5	18.70	2.22	2.14
1415	135.	85.7	86.1	81.2	82.2	51.5	19.10	2.25	2.16
1430	150.	86.0	86.3	82.3	81.7	50.5	18.80	2.23	2.13
1445	165.	86.3	86.7	82.1	82.5	49.0	19.00	2.24	2.17
1500	180.	86.6	87.0	81.9	82.5	48.0	18.80	2.22	2.25
1515	195.	85.3	85.8	79.4	81.8	49.0	19.10	2.26	2.28
1530	210.	85.6	86.1	80.5	82.0	49.0	19.20	2.25	2.29
1545	225.	85.5	86.0	79.5	82.0	48.5	19.20	2.27	2.32
1600	240.	85.8	86.2	80.6	82.1	48.5	19.20	2.23	2.35
1615	255.	86.0	86.4	81.3	82.3	48.0	18.80	2.22	2.37
1630	270.	86.1	86.6	81.0	82.1	47.0	18.80	2.22	2.39
1645	285.	85.2	85.6	78.3	81.5	48.0	19.30	2.24	2.41
1700	300.	85.4	85.9	80.0	81.8	48.0	19.20	2.26	2.42
1715	315.	85.4	86.0	80.7	81.9	47.5	19.00	2.24	2.45
1730	330.	85.9	86.5	81.4	82.2	46.5	19.10	2.25	2.45
1745	345.	85.5	85.9	78.6	81.5	46.5	19.20	2.28	2.47
1800	360.	85.4	85.9	79.9	81.8	47.0	18.70	2.22	2.49

7 QUESTIONABLE DATA

DATA DISCARDED

NO DATA TAKEN

EC-49 N-BUTANE
EVACUABLE CHAMBER
1974 JULY 8

CLOCK TIME	ELAPSED TIME(MIN)	ACETALD (PPM)	PROPALD (PPM)	BUTYRAL (PPM)	ACETONE (PPM)	MEK (PPM)	CI-N (PPM)	C2-N (PPM)	C4-N-2 (PPM)	C4-N-1 (PPM)
1200	0.	0.005	0.0010	0.0	0.004	0.001	0.0	0.0	0.0	0.0
1215	15.	0.044	0.0010	0.0020	0.006	0.032	0.0	0.0	0.004	0.0006
1230	30.	0.073	0.0020	0.0020	0.006	0.031	0.0004	0.0004	0.010	0.0023
1245	45.	0.119	0.0020	0.0020	0.012	0.104	0.0004	0.0007	0.014	0.0028
1300	60.	0.119	0.0020	0.0020	0.012	0.104	0.0005	0.0013	0.018	0.0034
1315	75.	0.119	0.0020	0.0020	0.012	0.104	0.0007	0.0011	0.019	0.0040
1330	90.	0.119	0.0020	0.0020	0.012	0.104	0.0011	0.0014	0.021	0.0046
1345	105.	0.119	0.0020	0.0020	0.012	0.104	0.0011	0.0014	0.022	0.0046
1400	120.	0.119	0.0020	0.0020	0.012	0.104	0.0011	0.0014	0.023	0.0046
1415	135.	0.119	0.0020	0.0020	0.012	0.104	0.0011	0.0014	0.023	0.0046
1430	150.	0.119	0.0020	0.0020	0.012	0.104	0.0011	0.0014	0.023	0.0046
1445	165.	0.119	0.0020	0.0020	0.012	0.104	0.0011	0.0014	0.023	0.0046
1500	180.	0.146	0.0050	0.0060	0.022	0.157	0.0011	0.0014	0.023	0.0046
1515	195.	0.155	0.0050	0.0060	0.023	0.158	0.0011	0.0014	0.023	0.0046
1530	210.	0.155	0.0050	0.0060	0.023	0.158	0.0011	0.0014	0.023	0.0046
1545	225.	0.152	0.0050	0.0060	0.023	0.160	0.0011	0.0014	0.023	0.0046
1600	240.	0.152	0.0050	0.0060	0.023	0.160	0.0011	0.0014	0.023	0.0046
1615	255.	0.158	0.0060	0.0060	0.027	0.171	0.0011	0.0018	0.025	0.0046
1630	270.	0.158	0.0060	0.0060	0.028	0.178	0.0013	0.0020	0.025	0.0046
1645	285.	0.159	0.0060	0.0060	0.031	0.192	0.0014	0.0022	0.026	0.0051
1700	300.	0.177	0.0060	0.0060	0.031	0.190	0.0014	0.0023	0.027	0.0057
1715	315.	0.162	0.0070	0.0060	0.031	0.190	0.0014	0.0023	0.027	0.0057
1730	330.	0.162	0.0070	0.0060	0.031	0.190	0.0014	0.0023	0.027	0.0057
1745	345.	0.162	0.0070	0.0060	0.031	0.190	0.0014	0.0023	0.027	0.0057
1800	360.	0.162	0.0070	0.0060	0.031	0.190	0.0014	0.0023	0.027	0.0057

----- NO DATA TAKEN ----- DATA DISCARDED 7 QUESTIONABLE DATA

EC-31 PROPENE
EVACUABLE CHAMBER
1974 JULY 10

BEGIN IRRADIATION 1030 0.25 INCH PYREX FILTER
ALL TEMPERATURES CORRECTED FOR ICE BATH T. = 31.0 DEGREES F.
62 GC SAMPLES TAKEN, NAST FACTOR 1.6; CO FACTOR 2.84/28.2; PAN CALIBR. 7
METHYL NITRATE = 3 PPB AT T = 6 HOURS

CLOCK TIME	ELAPSED TIME (MIN)	OZONE (PPM)	OXIDANT (PPM)	NO (PPM)	NO2-PAN (PPM)	NOX-PAN (PPM)	PROPENE (PPM)	PAN (PPM)	HCMD (PPM)	HCMD VOL (L)	03+NO /NO2	TOT N (PPM)	TOT C (PPM)
1030	0.	0.0	0.005	0.516	0.049	0.565	0.552	0.0	0.0	28.00	0.0	0.565	1.483
1045	15.	0.0	0.005	0.478	0.110	0.568	0.522	0.001	0.001	0.000	0.0	0.588	0.000
1100	30.	0.0	0.015	0.394	0.190	0.585	0.470	0.001	0.001	0.000	0.003	0.559	0.000
1115	45.	0.002	0.020	0.306	0.252	0.564	0.442	0.002	0.002	32.00	0.004	0.554	1.407
1130	60.	0.006	0.030	0.228	0.324	0.560	0.396	0.002	0.002	0.000	0.005	0.538	0.000
1145	75.	0.011	0.040	0.168	0.365	0.533	0.353	0.007	0.007	0.000	0.006	0.514	0.000
1200	90.	0.020	0.050	0.115	0.391	0.506	0.324	0.015	0.015	0.000	0.007	0.488	1.194
1215	105.	0.035	0.050	0.070	0.407	0.481	0.293	0.015	0.015	33.00	0.007	0.451	0.000
1230	120.	0.054	0.075	0.050	0.404	0.453	0.263	0.026	0.026	0.000	0.007	0.423	0.000
1245	135.	0.074	0.090	0.038	0.392	0.430	0.209	0.026	0.026	0.000	0.009	0.421	0.000
1300	150.	0.100	0.110	0.026	0.381	0.409	0.194	0.035	0.035	30.00	0.010	0.407	1.036
1315	165.	0.120	0.125	0.026	0.364	0.389	0.177	0.044	0.044	0.000	0.006	0.384	0.000
1330	180.	0.144	0.140	0.025	0.346	0.369	0.157	0.044	0.044	0.000	0.012	0.372	0.000
1345	195.	0.160	0.150	0.0137	0.3317	0.344	0.135	0.051	0.051	0.000	0.015	0.358	0.000
1400	210.	0.177	0.165	0.022	0.306	0.328	0.120	0.060	0.060	0.000	0.013	0.340	0.870
1415	225.	0.194	0.170	0.022	0.288	0.303	0.103	0.062	0.062	0.000	0.012	0.312	0.000
1430	240.	0.211	0.180	0.017	0.271	0.286	0.092	0.065	0.065	0.000	0.017	0.278	0.783
1445	255.	0.223	0.190	0.014	0.249	0.266	0.080	0.060	0.060	0.000	0.019	0.266	0.000
1500	270.	0.234	0.200	0.012	0.240	0.240	0.068	0.044	0.044	0.000	0.024	0.262	0.000
1515	285.	0.248	0.205	0.014	0.216	0.228	0.062	0.044	0.044	0.000	0.024	0.243	0.000
1530	300.	0.262	0.215	0.013	0.201	0.213	0.050	0.044	0.044	0.000	0.017	0.243	0.000
1545	315.	0.269	0.220	0.013	0.185	0.199	0.050	0.044	0.044	0.000	0.019	0.243	0.000
1600	330.	0.277	0.220	0.0117	0.1807	0.188	0.044	0.071	0.071	0.000	0.017	0.243	0.000
1615	345.	0.288	0.230	0.012	0.145	0.155	0.038	0.071	0.071	0.000	0.024	0.229	0.000
1630	360.	0.294	0.230	0.007	0.138	0.144	0.033	0.074	0.074	0.000	0.015	0.220	0.637

----- NO DATA TAKEN ----- DATA DISCARDED 7 QUESTIONABLE DATA

EC-51 PROPENE
EVACUABLE CHAMBER
1974 JULY 10

AVE SAMPLE TEMP(1) = 86.0
AVE SAMPLE TEMP(2) = 86.3
AVE WALL TEMP(1) = 81.3
AVE WALL TEMP(2) = 82.6
AVE RADOM = 2.21
AVE PH = 47.5
AVE SOLAR SIMULATOR POWER = 19.1

CLOCK TIME	ELAPSED TIME (MIN)	TS1 (DEG F)	TS2 (DEG F)	TW1 (DEG F)	TW2 (DEG F)	REL HUM (%)	SSPOWER (KW)	RADOM (MW)	CO (PPM)	ACETALD (PPM)	PROPALD (PPM)	ACETONE (PPM)
1030	0.	82.0	84.3	86.3	85.0	48.5	20.40	2.24	1.95	0.004	0.0010	0.005
1045	15.	86.0	87.2	84.6	81.7	48.0	19.10	2.20	1.95	0.004	0.0010	0.005
1100	30.	86.2	86.5	84.2	81.6	49.0	18.60	2.19	1.98	0.004	0.0010	0.005
1115	45.	86.1	86.4	81.0	83.7	49.5	18.80	2.22	2.00	0.004	0.0010	0.005
1130	60.	86.2	86.3	81.7	83.6	49.5	19.00	2.18	2.02	0.004	0.0010	0.005
1145	75.	86.3	86.4	81.3	83.4	49.5	19.20	2.24	2.04	0.004	0.0010	0.005
1200	90.	86.0	85.8	79.5	82.8	50.0	19.00	2.20	2.05	0.004	0.0010	0.005
1215	105.	85.6	85.8	80.0	82.6	50.0	19.00	2.20	2.07	0.004	0.0010	0.005
1230	120.	86.0	86.1	81.0	82.7	50.0	19.30	2.24	2.10	0.110	0.0	0.010
1245	135.	86.2	86.4	81.6	82.8	49.0	18.90	2.20	2.12	0.004	0.0010	0.005
1300	150.	86.5	86.6	82.0	82.8	48.5	19.00	2.22	2.14	0.004	0.0010	0.005
1315	165.	86.5	86.7	81.6	82.6	47.5	18.90	2.20	2.18	0.004	0.0010	0.005
1330	180.	86.0	86.2	80.7	82.5	47.5	18.90	2.15	2.22	0.122	0.0	0.011
1345	195.	86.3	86.5	81.4	82.7	47.5	18.30	2.15	2.25	0.004	0.0010	0.005
1400	210.	86.6	86.8	82.0	82.9	46.5	18.80	2.17	2.27	0.004	0.0010	0.005
1415	225.	86.6	86.9	80.7	82.5	46.0	19.00	2.22	2.32	0.004	0.0010	0.005
1430	240.	85.9	86.2	79.9	82.3	46.5	19.30	2.22	2.34	0.123	0.0	0.007
1445	255.	86.0	86.3	79.7	82.3	46.5	19.20	2.22	2.41	0.004	0.0010	0.005
1500	270.	85.8	86.1	80.1	82.3	46.5	19.10	2.23	2.42	0.004	0.0010	0.005
1515	285.	86.1	86.4	81.0	82.5	46.0	19.10	2.25	2.44	0.004	0.0010	0.005
1530	300.	86.0	86.2	79.7	82.0	45.5	19.40	2.24	2.46	0.112	0.0	0.020
1545	315.	85.4	85.6	79.4	81.8	46.5	19.40	2.23	2.52	0.004	0.0010	0.005
1600	330.	85.7	86.0	80.5	82.0	46.5	19.40	2.25	2.54	0.004	0.0010	0.005
1615	345.	86.1	86.3	81.2	82.2	45.5	19.50	2.23	2.57	0.004	0.0010	0.005
1630	360.	86.4	86.6	81.7	82.4	44.5	19.50	2.24	2.60	0.104	0.0	0.019

***** NO DATA TAKEN ----- DATA DISCARDED 7 QUESTIONABLE DATA

EC-32 PROPENE
EVACUABLE CHAMBER
1974 JULY 11

BEGIN IRRADIATION 1000 0.25 INCH PYREX FILTER
ALL TEMPERATURES CORRECTED FOR ICE BATH T. = 31.0 DEGREES F.
44 GC SAMPLES TAKEN, MAST FACTOR 1.6, CD FACTOR 2.84/27.2, PAN CALIBR. 7
METHYL NITRATE = 2 PPB AT T = 6 HOURS

CLOCK TIME	ELAPSED TIME (MIN)	OZONE (PPM)	OXIDANT (PPM)	NO (PPM)	NO2-PAN (PPM)	NO2-PAN (PPM)	PROPENE (PPM)	PAN (PPM)	HCHO (PPM)	HCHO VOL (L)	03+NO /NO2	TOT N (PPM)	TOT C (PPM)
1000	0.	0.0	0.005	0.524	0.060	0.586	0.551	0.0	0.0	30.00	0.0	0.584	1.470
1015	15.	0.0	0.005	0.480	0.097	0.577	0.534	0.0	0.0	0.000	0.0	0.577	0.000
1030	30.	0.0	0.010	0.444	0.144	0.588	0.504	0.0	0.0	0.000	0.0	0.588	0.000
1045	45.	0.0	0.015	0.382	0.194	0.585	0.478	0.0	0.0	0.000	0.0	0.576	0.000
1100	60.	0.001	0.020	0.322	0.239	0.563	0.445	0.001	0.022	39.00	0.001	0.562	1.473
1115	75.	0.002	0.025	0.262	0.277	0.542	0.417	0.002	0.000	0.000	0.002	0.541	0.000
1130	90.	0.005	0.035	0.204	0.323	0.524	0.389	0.005	0.000	0.000	0.005	0.530	0.000
1145	105.	0.010	0.040	0.156	0.343	0.499	0.360	0.010	0.000	0.000	0.010	0.534	0.000
1200	120.	0.016	0.045	0.118	0.368	0.483	0.330	0.016	0.061	33.00	0.016	0.492	0.000
1215	135.	0.028	0.055	0.084	0.386	0.470	0.304	0.028	0.000	0.000	0.028	0.480	0.000
1230	150.	0.041	0.070	0.061	0.393	0.455	0.287	0.041	0.013	0.000	0.041	0.468	0.000
1245	165.	0.061	0.085	0.046	0.409	0.453	0.259	0.061	0.007	0.000	0.061	0.472	0.000
1300	180.	0.078	0.100	0.037	0.389	0.424	0.236	0.078	0.021	33.00	0.078	0.448	1.074
1315	195.	0.099	0.110	0.029	0.381	0.407	0.223	0.099	0.034	0.000	0.099	0.437	0.000
1330	210.	0.122	0.125	0.023	0.362	0.386	0.198	0.122	0.034	0.000	0.122	0.419	0.000
1345	225.	0.145	0.140	0.023	0.347	0.369	0.177	0.145	0.034	0.000	0.145	0.407	0.000
1400	240.	0.163	0.150	0.023	0.330	0.349	0.164	0.163	0.039	34.00	0.163	0.392	0.000
1415	255.	0.180	0.165	0.019	0.306	0.324	0.138	0.180	0.047	0.000	0.180	0.368	0.000
1430	270.	0.195	0.170	0.019	0.290	0.310	0.120	0.195	0.047	0.000	0.195	0.356	0.000
1445	285.	0.208	0.185	0.014	0.273	0.287	0.107	0.208	0.054	0.000	0.208	0.338	0.000
1500	300.	0.224	0.195	0.014	0.257	0.270	0.095	0.224	0.054	34.00	0.224	0.325	0.013
1515	315.	0.237	0.200	0.013	0.240	0.252	0.082	0.237	0.060	0.000	0.237	0.310	0.013
1530	330.	0.250	0.205	0.013	0.219	0.231	0.070	0.250	0.060	0.000	0.250	0.292	0.013
1545	345.	0.259	0.220	0.013	0.210	0.222	0.064	0.259	0.064	32.00	0.259	0.287	0.016
1600	360.	0.272	0.220	0.012	0.196	0.207	0.054	0.272	0.066	0.000	0.272	0.275	0.017
1615	375.	0.282	0.230	0.012	0.173	0.184	0.044	0.282	0.072	0.000	0.282	0.254	0.020
1630	390.	0.292	0.230	0.012	0.168	0.180	0.036	0.292	0.072	0.000	0.292	0.252	0.021
1645	405.	0.299	0.235	0.011	0.157	0.167	0.036	0.299	0.074	0.000	0.299	0.241	0.021
1700	420.	0.306	0.245	0.011	0.139	0.151	0.036	0.306	0.074	0.000	0.306	0.224	0.024

----- NO DATA TAKEN ----- DATA DISCARDED ? QUESTIONABLE DATA

EC-52 PROPENE
EVACUABLE CHAMBER
1976 JULY 11

AVE SAMPLE TEMP(1) = 86.2
AVE SAMPLE TEMP(2) = 86.0
AVE WALL TEMP(1) = 81.3
AVE WALL TEMP(2) = 82.8
AVE RADION = 2.21
AVE RH = 43.0
AVE SOLAR SIMULATOR POWER = 19.4

CLOCK TIME	ELAPSED TIME (MIN)	TS1 (DEG F)	TS2 (DEG F)	TM1 (DEG F)	TM2 (DEG F)	REL HUM (%)	SSPOWER (KW)	RADION (MV)	CO (PPH)	ACETALD (PPH)	PROPALD (PPH)	ACETONE (PPH)
1000	0.	84.0	84.4	87.1	84.9	44.5	19.20	2.24	2.05	0.002	0.0010	0.003
1015	15.	86.4	86.3	84.7	81.8	44.0	19.00	2.24	2.07	0.002	0.0010	0.003
1030	30.	86.3	86.3	82.4	84.5	44.5	18.60	2.19	2.07	0.002	0.0010	0.003
1045	45.	86.1	86.0	81.5	84.0	45.0	19.30	2.18	2.08	0.002	0.0010	0.003
1100	60.	86.5	86.2	82.2	83.9	45.0	19.30	2.20	2.09	0.048	0.0010	0.005
1115	75.	86.8	86.6	82.6	83.7	44.5	19.90	2.20	2.12	0.002	0.0010	0.003
1130	90.	86.2	86.0	79.7	83.1	44.5	19.70	2.25	2.14	0.002	0.0010	0.003
1145	105.	86.3	86.1	80.9	83.1	44.5	19.70	2.26	2.16	0.002	0.0010	0.003
1200	120.	86.4	86.1	81.6	83.1	44.5	19.60	2.23	2.19	0.084	0.0010	0.010
1215	135.	86.8	86.5	82.1	83.2	43.5	19.20	2.20	2.20	0.002	0.0010	0.003
1230	150.	87.2	86.8	82.5	83.3	43.0	19.20	2.19	2.25	0.002	0.0010	0.003
1245	165.	86.0	85.7	79.4	82.5	43.5	18.90	2.19	2.29	0.002	0.0010	0.003
1300	180.	86.2	86.0	80.9	82.7	43.5	18.70	2.17	2.30	0.110	0.0020	0.010
1315	195.	86.1	86.0	80.3	82.6	43.5	19.00	2.18	2.32	0.002	0.0010	0.003
1330	210.	86.4	86.2	81.4	82.8	42.5	19.50	2.23	2.36	0.002	0.0010	0.003
1345	225.	86.8	86.6	81.9	82.9	42.0	19.70	2.23	2.39	0.002	0.0010	0.003
1400	240.	85.8	85.5	79.0	82.2	42.0	19.70	2.22	2.42	0.107	0.002	0.011
1415	255.	86.0	85.8	80.4	82.4	42.5	19.50	2.18	2.46	0.002	0.0010	0.003
1430	270.	85.8	85.4	79.7	82.2	42.5	19.50	2.19	2.50	0.002	0.0010	0.003
1445	285.	86.1	85.8	80.7	82.3	42.5	19.70	2.24	2.52	0.002	0.0010	0.003
1500	300.	86.3	86.0	80.7	82.2	41.5	19.70	2.19	2.56	0.109	0.0020	0.018
1515	315.	85.5	85.3	78.1	81.9	42.0	19.80	2.20	2.58	0.002	0.0010	0.003
1530	330.	85.9	85.6	80.5	82.1	41.5	19.40	2.20	2.61	0.002	0.0010	0.003
1545	345.	86.2	86.0	81.1	82.2	41.5	19.60	2.21	2.63	0.002	0.0010	0.003
1600	360.	86.5	86.2	81.7	82.5	40.5	19.90	2.21	2.63	0.106	0.0020	0.016
1615	375.	86.5	86.2	80.5	82.2	40.0	19.80	2.21	2.69	0.002	0.0010	0.003
1630	390.	85.8	85.6	79.7	82.0	40.5	19.70	2.24	2.71	0.002	0.0010	0.003
1645	405.	86.2	85.9	80.8	82.3	40.5	20.00	2.27	2.77	0.002	0.0010	0.003
1700	420.	86.4	86.2	81.4	82.4	40.0	19.80	2.23	2.80	0.002	0.0010	0.003

***** NO DATA TAKEN ***** DATA DISCARDED ? QUESTIONABLE DATA

EC-53 100 DEG F
EVACUABLE CHAMBER
1974 JULY 12

BEGIN IRRADIATION 1200 0.25 INCH PYREX FILTER
ALL TEMPERATURES CORRECTED FOR ICE BATH TEMP = 31.1 DEG F
64 GC SAMPLES TAKEN; WAST FACTOR 1.6; CO FACTOR 2.84/27.2; PAN CALIBR. 7
METHYL NITRATE = 1 PPB AT T = 6 HOURS

CLOCK TIME	ELAPSED TIME(MIN)	OTONE (PPM)	OXIDANT (PPM)	NO (PPM)	NO2-PAN (PPM)	NOX-PAN (PPM)	PROPENE (PPM)	PAN (PPM)	HCNO (PPM)	HCNO VOL (L)	Q3=NO2 /NO2	TOT N (PPM)	TOT C (PPM)
1200	0	0.0	0.005	0.552	0.077	0.000	0.551	0.0	0.0	30.00	0.0	0.629	1.483
1215	15	0.0	0.015	0.454	0.179	0.000	0.503	0.001	0.001	0.000	0.0	0.634	0.000
1230	30	0.0	0.025	0.346	0.282	0.000	0.441	0.001	0.001	0.000	0.0	0.629	0.000
1245	45	0.0	0.035	0.239	0.368	0.000	0.392	0.000	0.000	0.000	0.0	0.610	0.000
1300	60	0.006	0.045	0.154	0.418	0.372	0.356	0.004	0.036	42.00	0.002	0.576	1.303
1315	75	0.022	0.060	0.090	0.446	0.340	0.316	0.000	0.000	0.000	0.005	0.546	0.000
1330	90	0.046	0.080	0.047	0.464	0.311	0.276	0.015	0.000	0.000	0.005	0.526	0.000
1345	105	0.078	0.105	0.037	0.433	0.270	0.251	0.000	0.000	0.000	0.007	0.492	0.000
1400	120	0.110	0.125	0.031	0.415	0.247	0.211	0.029	0.065	34.00	0.008	0.475	1.036
1415	135	0.141	0.145	0.025	0.396	0.221	0.182	0.000	0.000	0.000	0.009	0.456	0.000
1430	150	0.171	0.170	0.025	0.357	0.181	0.154	0.041	0.000	0.000	0.012	0.424	0.000
1445	165	0.208	0.195	0.020	0.333	0.151	0.133	0.000	0.000	0.000	0.013	0.400	0.000
1500	180	0.234	0.215	0.013	0.311	0.123	0.108	0.051	0.083	34.00	0.010	0.376	0.836
1515	195	0.258	0.230	0.022	0.280	0.100	0.089	0.000	0.000	0.000	0.020	0.358	0.000
1530	210	0.281	0.245	0.017	0.264	0.079	0.077	0.060	0.000	0.000	0.018	0.341	0.000
1545	225	0.301	0.265	0.014	0.235	0.049	0.063	0.000	0.000	0.000	0.018	0.313	0.000
1600	240	0.318	0.270	0.019	0.207	0.021	0.052	0.067	0.098	34.00	0.030	0.283	0.000
1615	255	0.335	0.285	0.014	0.201	0.013	0.044	0.000	0.000	0.000	0.024	0.263	0.000
1630	270	0.351	0.295	0.017	0.183	0.197	0.036	0.069	0.000	0.000	0.032	0.249	0.000
1645	285	0.370	0.160	0.012	0.175	0.187	0.029	0.000	0.000	0.000	0.025	0.242	0.000
1700	300	0.380	0.315	0.017	0.149	0.162	0.022	0.080	0.109	34.30	0.043	0.246	0.000
1715	315	0.390	0.320	0.014	0.131	0.144	0.018	0.000	0.000	0.000	0.043	0.229	0.000
1730	330	0.398	0.330	0.014	0.117	0.129	0.014	0.088	0.000	0.000	0.049	0.220	0.000
1745	345	0.406	0.335	0.013	0.104	0.117	0.010	0.000	0.101	30.00	0.051	0.205	0.000
1800	360	0.410	0.335	0.013	0.102	0.115	0.008	0.088	0.000	0.000	0.053	0.203	0.609

***** NO DATA TAKEN ----- DATA DISCARDED ? QUESTIONABLE DATA

EC-53 100 DEG F
EVACUABLE CHAMBER
1974 JULY 12

AVE SAMPLE TEMP(1) = 101.1
AVE SAMPLE TEMP(2) = 100.7
AVE WALL TEMP(1) = 98.0
AVE WALL TEMP(2) = 97.9
AVE RADION = 2.22
AVE RH = 47.5
AVE SOLAR SIMULATOR POWER = 19.5

CLOCK TIME	ELAPSED TIME (MIN)	TS1 (DEG F)	TS2 (DEG F)	TM1 (DEG F)	TM2 (DEG F)	REL HUM (%)	SSPOWER (KW)	RADION (MV)	CO (PPM)	ACETALD (PPM)	PROPALD (PPM)	ACETONE (PPM)
1200	0.	99.1	99.2	101.0	100.3	49.5	19.80	2.21	2.08	0.001	0.0020	0.006
1215	15.	99.4	98.3	94.4	98.9	50.0	19.20	2.26	2.07	0.001	0.0020	0.006
1230	30.	99.0	98.1	95.4	98.3	52.5	18.90	2.22	2.10	0.001	0.0020	0.006
1245	45.	99.2	99.1	95.5	97.4	53.5	18.80	2.15	2.12	0.001	0.0020	0.006
1300	60.	100.1	99.9	95.1	97.4	53.0	19.00	2.19	2.18	0.001	0.0020	0.006
1315	75.	99.9	99.7	95.5	97.2	52.5	19.80	2.24	2.18	0.001	0.0020	0.006
1330	90.	99.6	99.4	95.0	96.9	52.5	19.30	2.21	2.24	0.001	0.0020	0.006
1345	105.	99.6	99.3	95.3	96.8	52.0	19.30	2.21	2.37	0.001	0.0020	0.006
1400	120.	100.4	99.9	97.1	96.7	51.5	19.00	2.21	2.30	0.001	0.0020	0.006
1415	135.	102.0	101.8	99.2	97.7	50.0	19.00	2.19	2.36	0.001	0.0020	0.006
1430	150.	102.7	102.3	100.1	98.1	48.5	19.70	2.26	2.40	0.001	0.0020	0.006
1445	165.	103.2	102.7	100.5	98.6	46.5	19.40	2.23	2.45	0.001	0.0020	0.006
1500	180.	103.6	103.0	101.3	99.1	45.5	19.50	2.23	2.50	0.001	0.0020	0.006
1515	195.	103.3	99.9	100.3	99.9	45.5	19.80	2.25	2.57	0.001	0.0020	0.006
1530	210.	100.7	100.0	97.1	97.0	47.5	20.00	2.24	2.59	0.001	0.0020	0.006
1545	225.	101.3	100.6	98.3	97.2	47.5	19.70	2.21	2.60	0.001	0.0020	0.006
1600	240.	101.7	101.1	99.0	97.3	46.5	19.90	2.22	2.67	0.001	0.0020	0.006
1615	255.	101.7	101.1	98.8	97.4	45.5	19.50	2.22	2.67	0.001	0.0020	0.006
1630	270.	102.0	101.3	99.2	97.5	45.0	19.80	2.23	2.75	0.001	0.0020	0.006
1645	285.	102.0	101.3	99.1	97.7	44.5	19.80	2.22	2.81	0.001	0.0020	0.006
1700	300.	102.0	101.4	98.9	97.8	43.5	19.60	2.24	2.83	0.001	0.0020	0.006
1715	315.	102.1	101.6	98.8	97.9	42.5	19.70	2.25	2.88	0.001	0.0020	0.006
1730	330.	102.0	101.5	98.6	98.0	42.5	19.80	2.22	2.92	0.001	0.0020	0.006
1745	345.	102.1	101.5	98.5	98.1	42.5	19.80	2.21	2.94	0.001	0.0020	0.006
1800	360.	102.4	101.4	98.3	98.1	42.0	19.70	2.19	3.02	0.001	0.0020	0.006

----- NO DATA TAKEN

----- DATA DISCARDED

7 QUESTIONABLE DATA

EC-54 60 DEG F
EVACUABLE CHAMBER
1974 JULY 15

BEGIN IRRADIATION AT 1100 0.25 INCH PYREX FILTER
ALL TEMPERATURES CORRECTED FOR ICE BATH TEMP = 31.0 DEG F.
42 GC SAMPLES TAKEN, MAST FACTOR 1.6, CO FACTOR 2.84/28.2, PAN CALIBR. 7
MEYHL NITRATE = 2 PPB AT Y = 6 HOURS

CLOCK TIME	ELAPSED TIME(MIN)	OZONE (PPM)	OXYDANT (PPM)	NO (PPM)	NO2-PAN (PPM)	NO2-PAN (PPM)	PROPENE (PPM)	PAN (PPM)	HCHO (PPM)	HCHO VOL (L)	G3940 /NO2	TOT N (PPM)	TOT C (PPM)
1100	0	0.0	0.005	0.527	0.060	0.586	0.514	0.0	0.0	27.00	0.0	0.587	1.553
1115	15	0.0	0.010	0.490	0.097	0.588	0.485	0.000	0.000	0.000	0.0	0.587	0.000
1130	30	0.001	0.015	0.408	0.155	0.564	0.456	0.0	0.000	0.000	0.002	0.563	0.000
1145	45	0.002	0.015	0.360	0.216	0.573	0.418	0.000	0.000	0.000	0.004	0.577	0.000
1200	60	0.004	0.025	0.298	0.238	0.537	0.385	0.002	0.020	34.00	0.005	0.538	1.271
1215	75	0.006	0.030	0.246	0.275	0.523	0.362	0.000	0.000	0.000	0.006	0.524	0.000
1230	90	0.009	0.035	0.202	0.308	0.511	0.349	0.005	0.000	0.000	0.006	0.515	0.000
1245	105	0.012	0.040	0.162	0.333	0.497	0.312	0.000	0.000	0.000	0.006	0.503	0.000
1300	120	0.017	0.040	0.133	0.351	0.484	0.291	0.010	0.060	32.00	0.006	0.494	1.085
1315	135	0.024	0.050	0.114	0.360	0.474	0.270	0.000	0.000	0.000	0.006	0.487	0.000
1330	150	0.029	0.055	0.091	0.376	0.454	0.256	0.016	0.000	0.000	0.007	0.482	0.000
1345	165	0.040	0.065	0.072	0.377	0.449	0.234	0.000	0.000	0.000	0.008	0.468	0.000
1400	180	0.047	0.070	0.062	0.374	0.435	0.225	0.000	0.082	35.00	0.008	0.458	0.000
1415	195	0.055	0.075	0.059	0.361	0.418	0.212	0.000	0.000	0.000	0.009	0.445	0.000
1430	210	0.064	0.080	0.050	0.358	0.406	0.200	0.028	0.000	0.000	0.010	0.437	0.000
1445	225	0.073	0.085	0.046	0.340	0.386	0.187	0.000	0.000	0.000	0.010	0.418	0.000
1500	240	0.079	0.090	0.038	0.337	0.376	0.175	0.035	0.088	32.00	0.009	0.410	0.880
1515	255	0.086	0.095	0.036	0.325	0.360	0.164	0.000	0.000	0.000	0.010	0.398	0.000
1530	270	0.094	0.100	0.0147	0.3537	0.347	0.156	0.039	0.000	0.000	0.004	0.386	0.000
1545	285	0.100	0.100	0.034	0.298	0.330	0.139	0.000	0.000	0.000	0.011	0.374	0.000
1600	300	0.108	0.103	0.025	0.291	0.315	0.131	0.045	0.084	33.00	0.009	0.361	0.772
1615	315	0.114	0.105	0.025	0.276	0.300	0.125	0.000	0.000	0.000	0.010	0.349	0.000
1630	330	0.120	0.115	0.024	0.267	0.289	0.114	0.050	0.000	0.000	0.011	0.341	0.000
1645	345	0.124	0.115	0.024	0.248	0.270	0.108	0.000	0.077	21.00	0.012	0.324	0.000
1700	360	0.130	0.120	0.023	0.233	0.255	0.102	0.055	0.000	0.000	0.013	0.311	0.701

----- NO DATA TAKEN ----- DATA DISCARDED 7 QUESTIONABLE DATA

EC-54 60 DEG F
EVACUABLE CHAMBER
1974 JULY 15

AVE SAMPLE TEMP(1) = 61.5
AVE SAMPLE TEMP(2) = 60.9
AVE WALL TEMP(1) = 52.7
AVE WALL TEMP(2) = 56.1
AVE RADICH = 2.23
AVE RH = 54.0
AVE SOLAR STIMULATOR POWER = 19.7

CLOCK TIME	ELAPSED TIME (MIN)	TS1 (DEG F)	TS2 (DEG F)	TW1 (DEG F)	TW2 (DEG F)	REL HUM (%)	SSPOMER (KNI)	RADIOM (NV)	CO (PPH)	ACETALD (PPH)	PROPALD (PPH)	ACETONE (PPH)
1100	0-	65.5	60.2	58.6	60.4	48.0	19.80	2.24	2.83	0.003	0.0010	0.001
1115	15-	64.4	64.2	55.5	56.6	49.0	19.30	2.23	2.83	0.003	0.0010	0.001
1130	30-	61.3	61.1	51.0	57.6	51.5	19.40	2.19	2.84	0.003	0.0010	0.001
1145	45-	62.0	61.6	53.4	57.7	53.0	19.60	2.24	2.83	0.003	0.0010	0.001
1200	60-	61.3	61.2	51.4	56.8	54.5	19.50	2.24	2.84	0.040	0.0020	0.002
1215	75-	61.3	60.9	51.4	56.3	55.0	19.50	2.23	2.85	0.003	0.0010	0.001
1230	90-	61.1	60.7	51.9	56.2	56.0	19.40	2.22	2.85	0.003	0.0010	0.001
1245	105-	61.7	61.3	53.1	56.1	55.5	19.40	2.19	2.86	0.003	0.0010	0.001
1300	120-	61.0	60.6	51.6	55.8	56.0	19.40	2.21	2.89	0.061	0.0	0.003
1315	135-	61.7	61.4	54.0	56.4	55.5	19.50	2.20	2.91	0.003	0.0010	0.001
1330	150-	61.0	60.6	51.5	55.8	55.5	19.40	2.17	2.92	0.003	0.0010	0.001
1345	165-	61.2	60.8	52.1	55.8	55.5	19.40	2.26	2.94	0.078	0.003	0.004
1400	180-	60.9	60.5	51.3	55.4	55.5	19.80	2.23	2.94	0.003	0.0010	0.001
1415	195-	60.6	60.2	51.1	55.1	55.0	19.70	2.20	2.94	0.003	0.0010	0.001
1430	210-	60.5	60.1	51.0	55.0	56.0	20.20	2.25	2.97	0.003	0.0010	0.001
1445	225-	60.8	60.3	52.0	55.3	58.5	20.20	2.25	3.00	0.087	0.0020	0.006
1500	240-	61.3	60.7	52.6	55.4	58.5	19.70	2.24	3.02	0.003	0.0010	0.001
1515	255-	60.8	60.3	51.4	55.1	55.0	20.20	2.23	3.03	0.003	0.0010	0.001
1530	270-	61.3	60.8	53.2	55.8	54.5	20.20	2.25	3.04	0.003	0.0010	0.001
1545	285-	61.3	60.8	52.0	55.5	54.0	20.00	2.26	3.05	0.090	0.0020	0.006
1600	300-	61.7	61.2	53.0	56.0	55.5	19.80	2.26	3.07	0.003	0.0010	0.001
1615	315-	61.6	61.3	52.5	55.8	53.5	19.70	2.21	3.09	0.003	0.0010	0.001
1630	330-	62.0	61.4	53.5	56.3	53.0	19.90	2.20	3.13	0.003	0.0010	0.001
1645	345-	60.8	60.4	50.8	55.2	53.5	20.00	2.26	3.13	0.092	0.0020	0.006
1700	360-	61.2	60.8	52.5	55.8	54.0	20.00	2.26	3.13	0.092	0.0020	0.006

***** NO DATA TAKEN *****

----- DATA DISCARDED -----

***** QUESTIONABLE DATA *****

EC-55 NO/NO2 = 4
EVACUABLE CHAMBER
1974 JULY 16

BEGIN IRRADIATION 0945 0.25 INCH PYREX FILTER
ALL TEMPERATURES CORRECTED FOR ICE BATH T. = 30.9 DEG F.
63 GC SAMPLES TAKEN, WAST FACTOR 1.6, CD FACTOR 2.84/27.1, PAN CALIBR. 7
METHYL NITRATE = 2 PPB AT T = 6 HOURS

CLOCK TIME	ELAPSED TIME(MIN)	OZONE (PPH)	OXIDANT (PPH)	NO (PPH)	NO2-PAN (PPH)	NOX-PAN (PPH)	PROPENE (PPH)	PAN (PPH)	HCHO (PPH)	HCHO VOL (L)	Q3*NO /NO2	TOT N (PPH)	TOT C (PPH)
945	0-	0-0	0-005	0-480	0-121	0-601	0-545	0-0	0-005	30.00	0-0	0-601	1-661
1000	15-	0-0	0-015	0-409	0-179	0-590	0-501	0-000	0-000	0-000	0-0	0-589	0-000
1015	30-	0-001	0-020	0-326	0-248	0-517	0-462	0-001	0-000	0-000	0-001	0-576	0-000
1030	45-	0-0-3	0-025	0-262	0-299	0-563	0-431	0-000	0-000	0-000	0-003	0-563	0-000
1045	60-	0-006	0-035	0-197	0-346	0-587	0-387	0-003	0-037	32.00	0-003	0-546	0-000
1100	75-	0-012	0-040	0-146	0-379	0-525	0-362	0-000	0-000	0-000	0-005	0-530	0-000
1115	90-	0-019	0-050	0-108	0-400	0-511	0-343	0-008	0-000	0-000	0-005	0-516	0-000
1130	105-	0-033	0-065	0-072	0-421	0-493	0-310	0-000	0-000	0-000	0-006	0-504	0-000
1145	120-	0-049	0-075	0-058	0-417	0-475	0-287	0-015	0-046	34.00	0-007	0-490	1-139
1200	135-	0-071	0-090	0-038	0-413	0-451	0-256	0-000	0-000	0-000	0-006	0-470	0-000
1215	150-	0-094	0-105	0-026	0-386	0-413	0-233	0-023	0-000	0-000	0-008	0-436	0-000
1230	165-	0-115	0-125	0-025	0-379	0-404	0-212	0-000	0-000	0-000	0-008	0-433	0-000
1245	180-	0-134	0-135	0-022	0-369	0-386	0-191	0-034	0-058	35.00	0-009	0-425	0-960
1300	195-	0-154	0-145	0-019	0-346	0-366	0-171	0-000	0-000	0-000	0-008	0-404	0-000
1315	210-	0-174	0-145	0-014	0-330	0-345	0-150	0-045	0-000	0-000	0-008	0-389	0-000
1330	225-	0-187	0-170	0-013	0-311	0-323	0-135	0-000	0-000	0-000	0-010	0-373	0-000
1345	240-	0-206	0-180	0-014	0-288	0-305	0-116	0-053	0-128	36.00	0-012	0-355	0-859
1400	255-	0-219	0-190	0-014	0-270	0-285	0-104	0-000	0-000	0-000	0-012	0-341	0-000
1415	270-	0-234	0-200	0-013	0-253	0-264	0-087	0-060	0-000	0-000	0-012	0-326	0-000
1430	285-	0-246	0-205	0-012	0-238	0-249	0-077	0-000	0-000	0-000	0-012	0-313	0-000
1445	300-	0-257	0-210	0-011	0-223	0-233	0-063	0-066	0-132	34.00	0-014	0-300	0-721
1500	315-	0-267	0-220	0-011	0-206	0-212	0-052	0-000	0-000	0-000	0-014	0-286	0-000
1515	330-	0-274	0-225	0-010	0-190	0-196	0-046	0-072	0-000	0-000	0-014	0-272	0-000
1530	345-	0-286	0-230	0-010	0-167	0-170	0-042	0-000	0-112	32.00	0-016	0-255	0-000
1545	360-	0-294	0-235	0-005	0-147	0-150	0-029	0-093	0-000	0-000	0-010	0-245	0-450

***** NO DATA TAKEN ----- DATA DISCARDED 7 QUESTIONABLE DATA

EC-55 NO/NO2 = 4
EVACUABLE CHAMBER
1974 JULY 16

AVE SAMPLE TEMP(1) = 86.2
AVE SAMPLE TEMP(2) = 85.9
AVE WALL TEMP(1) = 80.9
AVE WALL TEMP(2) = 83.1
AVE RADION = 2.21
AVE PH = 46.5
AVE SOLAR SIMULATOR POWER = 19.6

CLOCK TIME	ELAPSED TIME(MIN)	TS1 (DEG F)	TS2 (DEG F)	TW1 (DEG F)	TW2 (DEG F)	REL HUM (%)	SSPOWER (KW)	RADION (MV)	CO (PPH)	ACETALD (PPH)	PROPALD (PPH)	ACETONE (PPH)
945	0.	84.0	85.2	85.9	85.3	47.5	19.40	2.20	2.10	0.003	0.0010	0.004
1000	15.	84.1	87.9	85.6	85.3	47.0	19.30	2.26	2.10	0.003	0.0010	0.004
1015	30.	86.4	86.2	80.7	84.4	47.5	19.50	2.24	2.12	0.003	0.0010	0.004
1030	45.	85.5	85.3	75.1	83.6	48.5	19.40	2.19	2.14	0.003	0.0010	0.004
1045	60.	85.7	85.4	73.5	83.4	49.5	19.30	2.19	2.16	0.003	0.0010	0.004
1100	75.	86.0	85.6	81.6	83.3	49.0	18.90	2.16	2.20	0.003	0.0010	0.004
1115	90.	86.3	85.9	82.1	83.3	48.5	18.90	2.15	2.24	0.003	0.0010	0.004
1130	105.	86.6	86.1	82.5	83.3	48.0	19.80	2.25	2.28	0.003	0.0010	0.004
1145	120.	86.9	86.6	82.8	83.3	47.0	19.80	2.23	2.29	0.003	0.0010	0.004
1200	135.	86.3	86.0	80.0	82.7	46.5	19.50	2.23	2.32	0.003	0.0010	0.004
1215	150.	86.2	85.9	80.9	83.8	47.0	19.30	2.22	2.32	0.003	0.0010	0.004
1230	165.	86.5	86.2	81.8	83.0	46.0	19.40	2.19	2.33	0.003	0.0010	0.004
1245	180.	86.8	86.5	82.3	83.1	45.0	19.40	2.20	2.41	0.003	0.0010	0.011
1300	195.	86.9	86.5	82.1	83.0	45.5	19.30	2.20	2.45	0.003	0.0010	0.011
1315	210.	86.1	85.8	83.4	82.7	45.0	19.20	2.16	2.49	0.003	0.0010	0.011
1330	225.	86.5	86.2	81.6	83.0	44.5	19.20	2.21	2.52	0.003	0.0010	0.011
1345	240.	86.8	86.5	82.2	83.1	44.0	19.90	2.21	2.55	0.003	0.0010	0.014
1400	255.	86.2	85.8	79.5	82.3	44.5	19.60	2.19	2.58	0.003	0.0010	0.014
1415	270.	85.7	85.5	78.7	82.3	44.5	20.10	2.25	2.58	0.003	0.0010	0.014
1430	285.	85.7	85.3	79.3	82.2	45.0	20.10	2.23	2.61	0.003	0.0010	0.014
1445	300.	86.0	85.6	80.2	82.3	45.0	20.10	2.23	2.65	0.003	0.0010	0.014
1500	315.	85.2	84.9	78.0	81.6	45.0	20.20	2.25	2.67	0.003	0.0020	0.014
1515	330.	85.6	85.2	79.7	81.9	45.5	20.20	2.25	2.64	0.003	0.0020	0.014
1530	345.	85.9	85.5	80.6	82.0	45.0	20.10	2.23	2.75	0.003	0.0020	0.014
1545	360.	86.2	85.9	81.3	82.3	44.0	19.90	2.25	2.82	0.003	0.0040	0.016

----- DATA DISCARDED -----

----- NO DATA TAKEN -----

7 QUESTIONABLE DATA

EC-36 NO/NO2 = 1
EVACUABLE CHAMBER
1974 JULY 17

BEGIN IRRADIATION AT 1000 0.25 INCH PYREX FILTER
ALL TEMPERATURES CORRECTED FOR ICE BATH T_c = 31.0 DEG F.
43 GC SAMPLES TAKEN, MAST FACTOR 1.6, CO FACTOR 2.84/26.9, PAN CALIBR. 7
METHYL NITRATE = 3 PPB AT T = 6 HOURS

CLOCK TIME	ELAPSED TIME(MIN)	OZONE (PPH)	OXYDANT (PPH)	NO (PPH)	NO2-PAN (PPH)	NO2-NCX-PAN (PPH)	PROPENE (PPH)	PAN (PPH)	HCHO (PPH)	HCHO VOL (L)	OSNO /NO2	TOT N (PPH)	TOT C (PPH)
1000	0.	0.0	0.030	0.311	0.283	0.399	0.531	0.0	0.0	38.00	0.0	0.594	1.610
1015	15.	0.003	0.040	0.251	0.333	0.567	0.493	0.001	0.002	0.584	0.002	0.584	0.584
1030	30.	0.004	0.045	0.204	0.368	0.575	0.456	0.001	0.002	0.574	0.002	0.574	0.574
1045	45.	0.010	0.050	0.156	0.398	0.551	0.420	0.005	0.004	0.557	0.004	0.557	0.557
1100	60.	0.016	0.065	0.110	0.418	0.533	0.390	0.005	0.005	0.533	0.005	0.533	0.533
1115	75.	0.030	0.070	0.082	0.437	0.518	0.360	0.010	0.006	0.526	0.006	0.526	0.526
1130	90.	0.047	0.080	0.061	0.436	0.496	0.332	0.010	0.007	0.508	0.007	0.508	0.508
1145	105.	0.063	0.100	0.046	0.434	0.478	0.305	0.019	0.007	0.494	0.007	0.494	0.494
1200	120.	0.086	0.115	0.036	0.436	0.471	0.276	0.019	0.007	0.491	0.007	0.491	0.491
1215	135.	0.107	0.130	0.026	0.408	0.433	0.253	0.029	0.008	0.458	0.008	0.458	0.458
1230	150.	0.128	0.145	0.024	0.391	0.414	0.227	0.029	0.008	0.444	0.008	0.444	0.444
1245	165.	0.146	0.155	0.023	0.375	0.395	0.205	0.037	0.008	0.431	0.008	0.431	0.431
1300	180.	0.164	0.170	0.018	0.353	0.368	0.185	0.037	0.008	0.408	0.008	0.408	0.408
1315	195.	0.182	0.180	0.023	0.336	0.351	0.164	0.047	0.012	0.401	0.012	0.401	0.401
1330	210.	0.198	0.190	0.013	0.313	0.326	0.140	0.047	0.008	0.373	0.008	0.373	0.373
1345	225.	0.214	0.203	0.014	0.287	0.313	0.120	0.047	0.010	0.362	0.010	0.362	0.362
1400	240.	0.225	0.205	0.012	0.260	0.289	0.109	0.054	0.010	0.346	0.010	0.346	0.346
1415	255.	0.239	0.220	0.014	0.266	0.276	0.096	0.054	0.013	0.336	0.013	0.336	0.336
1430	270.	0.251	0.225	0.013	0.241	0.253	0.085	0.061	0.014	0.316	0.014	0.316	0.316
1445	285.	0.262	0.235	0.012	0.235	0.244	0.074	0.061	0.013	0.311	0.013	0.311	0.311
1500	300.	0.270	0.240	0.012	0.220	0.224	0.062	0.061	0.015	0.298	0.015	0.298	0.298
1515	315.	0.283	0.245	0.011	0.205	0.210	0.057	0.071	0.015	0.282	0.015	0.282	0.282
1530	330.	0.293	0.250	0.012	0.182	0.196	0.048	0.071	0.016	0.263	0.016	0.263	0.263
1545	345.	0.301	0.255	0.010	0.178	0.188	0.043	0.079	0.021	0.248	0.021	0.248	0.248
1600	360.	0.309	0.260	0.011	0.159	0.167	0.033	0.079	0.021	0.248	0.021	0.248	0.248

----- NO DATA TAKEN ----- DATA DISCARDED ? QUESTIONABLE DATA

EC-56 NO/NO2 = 1
EVACUABLE CHAMBER
1974 JULY 17

AVE SAMPLE TEMP(1) = 86.1
AVE SAMPLE TEMP(2) = 85.7
AVE WALL TEMP(1) = 81.5
AVE WALL TEMP(2) = 82.7
AVE RADTOM = 2.22
AVE RH = 48.5
AVE SOLAR SIMULATOR POWER = 19.8

CLOCK TIME	ELAPSED TIME (MIN)	TS1 (DEG F)	TS2 (DEG F)	TH1 (DEG F)	TH2 (DEG F)	REL HUM (%)	SSPOWER (KW)	RADIOM (MV)	CO (PPM)	ACETALD (PPM)	PROPALD (PPM)	ACETONE (PPM)
1000	0.	84.3	84.6	85.5	85.3	48.5	19.70	2.23	2.81	0.002	0.0010	0.003
1015	15.	85.0	85.3	85.3	85.3	48.0	19.20	2.21	2.82	0.002	0.0010	0.003
1030	30.	85.7	85.6	79.3	85.0	48.5	19.80	2.16	2.83	0.002	0.0010	0.003
1045	45.	84.9	84.7	78.3	83.3	50.5	19.80	2.23	2.85	0.002	0.0010	0.003
1100	60.	85.1	84.8	79.8	82.9	52.5	19.60	2.24	2.88	0.054	0.0020	0.004
1115	75.	85.3	85.0	80.6	82.8	52.5	19.70	2.24	2.89	0.002	0.0010	0.003
1130	90.	85.8	85.3	81.2	82.7	52.0	20.00	2.25	2.94	0.002	0.0010	0.003
1145	105.	86.0	85.5	81.7	82.7	51.0	20.00	2.22	2.97	0.002	0.0010	0.003
1200	120.	86.7	85.9	85.3	82.5	50.0	19.70	2.22	2.99	0.080	0.0020	0.009
1215	135.	87.2	86.4	85.3	82.7	49.0	19.30	2.21	3.02	0.002	0.0010	0.003
1230	150.	85.9	85.4	75.6	82.0	48.5	19.40	2.22	3.04	0.002	0.0010	0.003
1245	165.	86.0	85.5	81.0	82.3	49.5	19.50	2.25	3.07	0.002	0.0010	0.003
1300	180.	85.6	85.2	80.0	82.1	49.0	19.50	2.18	3.11	0.102	0.0020	0.010
1315	195.	86.1	85.6	81.0	82.3	49.0	20.20	2.23	3.17	0.002	0.0010	0.003
1330	210.	86.3	86.0	81.7	82.4	48.0	19.60	2.17	3.18	0.002	0.0010	0.003
1345	225.	85.3	84.8	76.9	81.7	48.5	19.60	2.22	3.20	0.002	0.0010	0.003
1400	240.	85.5	85.1	80.4	81.9	48.5	19.60	2.15	3.23	0.102	0.0020	0.010
1415	255.	86.5	86.0	82.6	81.6	48.0	20.00	2.21	3.28	0.002	0.0010	0.003
1430	270.	86.3	85.9	80.5	81.9	47.5	20.00	2.22	3.30	0.002	0.0010	0.003
1445	285.	86.7	86.1	81.5	82.2	47.0	20.20	2.25	3.32	0.002	0.0010	0.003
1500	300.	86.9	86.4	82.1	82.4	45.5	20.00	2.23	3.37	0.092	0.0020	0.014
1515	315.	87.4	87.0	82.6	82.9	45.0	20.00	2.30	3.39	0.002	0.0010	0.003
1530	330.	86.4	86.0	76.7	82.3	44.5	19.90	2.23	3.41	0.002	0.0010	0.003
1545	345.	86.6	86.2	81.1	82.8	44.5	20.00	2.22	3.47	0.002	0.0010	0.003
1600	360.	86.9	86.5	81.9	82.9	44.0	19.90	2.19	3.48	0.099	0.0020	0.018

7 QUESTIONABLE DATA

DATA DISCARDED

NO DATA TAKEN

EC-57 PROPENE
EVACUABLE CHAMBER
1974 JULY 18

BEGIN IRRADIATION 0930 0.25 INCH PYREX FILTER
ALL TEMPERATURES CORRECTED FOR ICE BATH T. = 31.1 DEG F.
43 CC SAMPLES TAKEN, MAST FACTOR 1.6, CO FACTOR 2.84/27.0, PAN CALIBR. 7
METHYL NITRATE = 2 PPM AT T = 6 HOURS

CLOCK TIME	ELAPSED TIME(MIN)	OZONE (PPM)	OXIDANT (PPM)	NO (PPM)	NO2-PAN (PPM)	NOX-PAN (PPM)	PROPENE (PPM)	PAN (PPM)	HCNO (PPM)	HCNO VOL (L)	O3+NO /NO2	TOT N (PPM)	TOT C (PPM)
930	0-	0.0	0.005	0.538	0.060	0.598	0.531	0.0	0.0	30.00	0.0	0.598	1.410
945	15-	0.0	0.005	0.490	0.086	0.578	0.508	0.000	0.000	0.000	0.0	0.578	0.000
1000	30-	0.0	0.015	0.430	0.144	0.576	0.482	0.0	0.000	0.000	0.0	0.576	0.000
1015	45-	0.0	0.015	0.374	0.189	0.573	0.457	0.000	0.000	0.000	0.0	0.564	0.000
1030	60-	0.0	0.025	0.310	0.232	0.568	0.422	0.001	0.012	31.00	0.0	0.542	1.360
1045	75-	0.0	0.030	0.244	0.277	0.545	0.393	0.000	0.000	0.000	0.0	0.542	0.000
1100	90-	0.003	0.035	0.214	0.319	0.550	0.372	0.002	0.000	0.000	0.002	0.535	0.000
1115	105-	0.006	0.045	0.170	0.361	0.533	0.342	0.000	0.000	0.000	0.003	0.535	0.000
1130	120-	0.013	0.050	0.125	0.390	0.515	0.320	0.006	0.026	36.00	0.004	0.521	1.161
1145	135-	0.022	0.060	0.096	0.398	0.494	0.294	0.000	0.000	0.000	0.005	0.504	0.000
1200	150-	0.033	0.075	0.073	0.408	0.479	0.271	0.013	0.000	0.000	0.006	0.494	0.000
1215	165-	0.050	0.085	0.049	0.397	0.449	0.252	0.000	0.000	0.000	0.006	0.463	0.000
1230	180-	0.071	0.100	0.037	0.403	0.441	0.230	0.021	0.025	31.00	0.007	0.461	0.955
1245	195-	0.083	0.115	0.026	0.395	0.420	0.210	0.000	0.000	0.000	0.006	0.446	0.000
1300	210-	0.104	0.125	0.025	0.379	0.403	0.192	0.029	0.000	0.000	0.007	0.433	0.000
1315	225-	0.121	0.140	0.023	0.364	0.385	0.177	0.000	0.000	0.000	0.008	0.420	0.000
1330	240-	0.140	0.150	0.022	0.348	0.368	0.159	0.037	0.060	34.00	0.009	0.407	0.854
1345	255-	0.158	0.170	0.016	0.329	0.344	0.142	0.000	0.000	0.000	0.008	0.386	0.000
1400	270-	0.174	0.175	0.014	0.314	0.326	0.123	0.046	0.000	0.000	0.008	0.374	0.000
1415	285-	0.189	0.180	0.014	0.297	0.309	0.107	0.000	0.000	0.000	0.009	0.360	0.000
1430	300-	0.198	0.190	0.014	0.282	0.294	0.098	0.051	0.083	34.00	0.010	0.348	0.703
1445	315-	0.213	0.195	0.013	0.258	0.270	0.085	0.000	0.000	0.000	0.011	0.325	0.000
1500	330-	0.225	0.205	0.005	0.250	0.255	0.079	0.057	0.000	0.000	0.012	0.312	0.000
1515	345-	0.234	0.220	0.012	0.226	0.239	0.076	0.000	0.066	30.10	0.012	0.299	0.000
1530	360-	0.243	0.220	0.011	0.209	0.229	0.058	0.065	0.000	0.000	0.013	0.284	0.641

----- NO DATA TAKEN

----- DATA DISCARDED

----- QUESTIONABLE DATA

EC-57 PROPENE
EVACUABLE CHAMBER
1974 JULY 18

AVE SAMPLE TEMP(1) = 86.1
AVE SAMPLE TEMP(2) = 85.7
AVE WALL TEMP(1) = 81.5
AVE WALL TEMP(2) = 82.7
AVE RADTOM = 2.22
AVE PH = 48.5
AVE SOLAR SIMULATOR POWER = 20.0

CLOCK	ELAPSED	TS1	TS2	TM1	TM2	REL HUM	SSPOWER	RADIOM	CO	ACETALD	PROPALD	ACETONE
TIME	(MIN)	(DEG F)	(DEG F)	(DEG F)	(DEG F)	(%)	(KW)	(IN)	(PPM)	(PPM)	(PPM)	(PPM)
930	0.	82.77	84.9	87.7	86.0	49.0	18.50	2.23	2.20	0.002	0.0010	0.003
945	15.	88.6	88.2	87.8	86.3	48.5	19.30	2.17	2.22	0.002	0.0010	0.003
1000	30.	85.8	85.5	79.4	84.7	49.5	19.30	2.18	2.23	0.002	0.0010	0.003
1015	45.	85.9	85.5	84.2	81.1	33.0	20.40	2.28	2.25	0.002	0.0010	0.003
1030	60.	86.2	85.8	82.1	83.9	51.5	20.00	2.23	2.29	0.034	0.0010	0.003
1045	75.	86.5	86.0	82.5	83.7	51.0	19.60	2.19	2.31	0.002	0.0010	0.003
1100	90.	86.8	86.2	82.9	83.6	50.0	19.80	2.21	2.31	0.002	0.0010	0.003
1115	105.	85.6	85.2	79.2	82.7	50.0	20.00	2.20	2.32	0.002	0.0010	0.003
1130	120.	85.6	85.0	79.6	82.6	51.0	20.00	2.18	2.34	0.072	0.0010	0.003
1145	135.	86.0	85.4	80.9	82.7	51.0	19.90	2.27	2.35	0.002	0.0010	0.003
1200	150.	86.3	85.7	81.6	82.7	50.0	20.20	2.23	2.40	0.002	0.0010	0.003
1215	165.	86.1	86.7	82.1	82.9	49.5	20.20	2.22	2.43	0.002	0.0010	0.003
1230	180.	87.0	86.5	82.6	83.0	48.5	20.10	2.25	2.48	0.086	0.0010	0.008
1245	195.	85.7	85.2	78.8	81.9	48.5	20.20	2.25	2.50	0.002	0.0010	0.003
1300	210.	85.7	85.2	80.3	82.1	49.5	20.10	2.20	2.53	0.002	0.0010	0.003
1315	225.	86.2	85.6	81.3	82.4	49.5	20.00	2.23	2.56	0.002	0.0010	0.003
1330	240.	86.5	85.9	81.8	82.5	48.5	20.00	2.24	2.60	0.104	0.0010	0.010
1345	255.	87.0	85.4	82.4	82.8	48.0	20.00	2.22	2.64	0.002	0.0010	0.003
1400	270.	86.3	85.8	79.9	82.1	47.0	20.30	2.20	2.66	0.002	0.0010	0.003
1415	285.	85.2	84.8	78.3	81.9	48.0	20.00	2.19	2.70	0.002	0.0010	0.003
1430	300.	85.4	84.9	78.7	81.4	48.5	20.50	2.23	2.73	0.094	0.0010	0.011
1445	315.	85.0	84.4	78.2	80.4	48.0	20.50	2.24	2.75	0.002	0.0010	0.003
1500	330.	86.1	85.3	80.8	80.9	49.0	20.50	2.28	2.78	0.002	0.0010	0.003
1515	345.	86.5	85.7	81.5	81.5	48.5	20.50	2.24	2.83	0.002	0.0010	0.003
1530	360.	86.8	86.1	82.0	81.9	47.0	20.50	2.25	2.85	0.110	0.0010	0.016

----- NO DATA TAKEN ----- DATA DISCARDED ? QUESTIONABLE DATA

EC-59 NO/NO2 = 0.25
EVACUABLE CHAMBER
1974 JULY 22

BEGIN IRRADIATION AT 1115 0.25 INCH PYREX FILTER
ALL TEMPERATURES CORRECTED FOR ICE BATH TEMP = 31.1 DEG F
NO AND NO2 AT 1115 ESTIMATED TO BE 0.136 AND 0.461 PPM, RESPECTIVELY
64 GC SAMPLES TAKEN, NAST FACTOR 1.6, CO 10 PPM FULL SCALE, PAN CALIBR. 7
METHYL NITRATE = 2 PPB AT T = 6 HOURS

CLOCK TIME	ELAPSED TIME(MIN)	OZONE (PPM)	OXIDANT (PP4)	NO (PPM)	NO2-PAN (PPM)	NOX-PAN (PPM)	PROPENE (PPM)	PAN (PPM)	HCNO (PPM)	HCNO VOL (L)	Q3=NO /NO2	TOT N (PPM)	TOT C (PPMC)
1115	0	0.0	0.060	0.1247	0.4817	0.6107	0.530	0.0	0.001	30.00	0.0	0.605	1.407
1120	15	0.018	0.075	0.118	0.468	0.598	0.493	0.001	0.005	0.005	0.005	0.586	0.005
1145	30	0.025	0.080	0.082	0.494	0.378	0.466	0.001	0.004	0.004	0.004	0.576	0.004
1200	45	0.039	0.090	0.072	0.491	0.564	0.437	0.001	0.006	0.006	0.006	0.565	0.006
1215	60	0.050	0.105	0.050	0.488	0.538	0.401	0.004	0.005	0.005	0.005	0.542	0.005
1230	75	0.058	0.115	0.043	0.477	0.520	0.366	0.001	0.007	0.007	0.007	0.515	0.007
1245	90	0.099	0.130	0.035	0.469	0.503	0.335	0.011	0.007	0.007	0.007	0.494	0.007
1300	105	0.114	0.150	0.029	0.450	0.476	0.304	0.001	0.007	0.007	0.007	0.482	0.007
1315	120	0.130	0.165	0.024	0.438	0.461	0.277	0.021	0.009	0.009	0.009	0.456	0.009
1330	135	0.157	0.180	0.023	0.408	0.431	0.250	0.001	0.009	0.009	0.009	0.448	0.009
1345	150	0.173	0.195	0.022	0.396	0.415	0.223	0.030	0.008	0.008	0.008	0.419	0.008
1400	165	0.194	0.205	0.014	0.370	0.383	0.198	0.001	0.009	0.009	0.009	0.402	0.009
1415	180	0.210	0.225	0.016	0.347	0.363	0.171	0.040	0.008	0.008	0.008	0.385	0.008
1430	195	0.224	0.235	0.013	0.328	0.340	0.150	0.001	0.011	0.011	0.011	0.370	0.011
1445	210	0.241	0.235	0.011	0.311	0.321	0.131	0.048	0.012	0.012	0.012	0.350	0.012
1500	225	0.246	0.240	0.013	0.285	0.297	0.116	0.001	0.014	0.014	0.014	0.324	0.014
1515	240	0.257	0.255	0.012	0.266	0.277	0.104	0.0577	0.016	0.016	0.016	0.301	0.016
1530	255	0.266	0.255	0.013	0.251	0.257	0.087	0.001	0.016	0.016	0.016	0.278	0.016
1545	270	0.278	0.260	0.013	0.225	0.237	0.075	0.063	0.018	0.018	0.018	0.254	0.018
1600	285	0.286	0.265	0.012	0.210	0.221	0.062	0.001	0.018	0.018	0.018	0.244	0.018
1615	300	0.294	0.270	0.012	0.194	0.201	0.056	0.068	0.018	0.018	0.018	0.244	0.018
1630	315	0.302	0.275	0.011	0.184	0.193	0.046	0.001	0.022	0.022	0.022	0.247	0.022
1645	330	0.312	0.280	0.010	0.168	0.172	0.042	0.070	0.022	0.022	0.022	0.230	0.022
1700	345	0.316	0.270	0.011	0.153	0.163	0.033	0.001	0.027	0.027	0.027	0.219	0.027
1715	360	0.324	0.290	0.012	0.143	0.149	0.028	0.079	0.027	0.027	0.027	0.214	0.027

----- NO DATA TAKEN ----- DATA DISCARDED 7 QUESTIONABLE DATA

EC-59 NO/NO2 = 0.25
EVACUABLE CHAMBER
1974 JULY 22

AVE SAMPLE TEMP(1) = 86.0
AVE SAMPLE TEMP(2) = 85.4
AVE WALL TEMP(1) = 80.9
AVE WALL TEMP(2) = 82.3
AVE RADICH = 2.23
AVE RH = 49.5
AVE SOLAR SIMULATOR POWER = 20.3

CLOCK TIME	ELAPSED TIME(MIN)	TS1 (DEG F)	TS2 (DEG F)	TN1 (DEG F)	TN2 (DEG F)	REL HUM (%)	SPONER (KW)	RADIOM (MV)	CO (PPM)	ACETALD (PPM)	PROPALD (PPM)	ACETONE (PPM)
1115	0.	82.4	84.3	85.2	86.6	50.0	21.00	2.23	1.97	0.004	0.0010	0.001
1130	15.	85.4	85.0	79.3	83.5	50.5	20.40	2.28	1.95	0.004	0.0010	0.001
1145	30.	84.8	84.3	79.4	82.3	53.0	19.90	2.18	1.97	0.004	0.0010	0.001
1200	45.	86.0	85.3	82.2	81.8	53.5	20.00	2.22	1.99	0.004	0.0010	0.001
1215	60.	85.2	84.4	79.5	81.4	53.5	20.00	2.22	2.01	0.050	0.0010	0.004
1230	75.	85.5	84.7	80.5	81.6	53.0	20.20	2.22	2.02	0.004	0.0010	0.001
1245	90.	85.8	85.0	81.2	81.7	52.5	20.00	2.18	2.07	0.004	0.0010	0.001
1300	105.	86.3	85.5	81.6	81.9	51.5	20.80	2.26	2.10	0.004	0.0010	0.001
1315	120.	86.6	85.9	82.1	82.2	50.0	20.20	2.23	2.10	0.083	0.0010	0.006
1330	135.	86.9	86.2	82.5	82.4	49.0	20.10	2.24	2.12	0.004	0.0010	0.001
1345	150.	87.3	86.4	82.9	82.8	48.0	20.20	2.24	2.17	0.004	0.0010	0.001
1400	165.	87.6	86.9	83.2	83.1	46.5	19.90	2.19	2.20	0.106	0.0020	0.010
1415	180.	87.0	86.4	80.5	82.4	48.0	20.00	2.21	2.21	0.004	0.0010	0.001
1430	195.	86.2	85.7	80.5	82.4	48.0	20.00	2.25	2.29	0.004	0.0010	0.001
1445	210.	86.0	85.3	79.8	82.3	48.5	20.60	2.21	2.21	0.004	0.0010	0.001
1500	225.	86.3	85.7	80.9	82.5	48.5	20.60	2.25	2.29	0.004	0.0010	0.001
1515	240.	86.6	86.0	81.7	82.7	48.0	20.10	2.23	2.31	0.004	0.0010	0.001
1530	255.	85.8	85.3	81.7	81.7	48.0	20.20	2.24	2.33	0.111	0.0020	0.011
1545	270.	85.5	84.9	79.5	81.3	49.0	20.20	2.24	2.38	0.004	0.0010	0.001
1600	285.	85.6	85.0	79.8	81.5	49.5	20.20	2.23	2.40	0.004	0.0010	0.001
1615	300.	86.1	85.4	80.8	81.8	48.5	20.70	2.22	2.43	0.004	0.0010	0.001
1630	315.	86.5	85.7	81.3	81.9	48.0	20.40	2.22	2.47	0.101	0.0020	0.012
1645	330.	85.6	85.0	78.4	81.4	47.5	20.40	2.26	2.50	0.004	0.0010	0.001
1700	345.	85.8	85.2	79.6	81.7	48.0	20.50	2.26	2.52	0.004	0.0010	0.001
1715	360.	86.0	85.3	80.4	81.9	47.5	20.60	2.24	2.59	0.096	0.0030	0.014

***** NO DATA TAKEN ***** DATA DISCARDED ***** 7 QUESTIONABLE DATA

EC-60 PROPENE
EVACUABLE CHAMBER
1974 JULY 23

BEGIN IRRADIATION 0915 0.25 INCH PYREX FILTER
ALL TEMPERATURES CORRECTED FOR ICE BATH TEMP = 31.0 DEG F
64 GC SAMPLES TAKEN, MASTY FACTOR 1.6, CO FACTOR 2.84/26.5, PAN CALIBR. 7

CLOCK TIME	ELAPSED TIME(MIN)	OZONE (PPM)	OXIDANT (PPM)	NO (PPM)	NO2-PAN (PPM)	NOX-PAN (PPM)	PROPENE (PPM)	PAN (PPM)	HCHO (PPM)	HCHO VOL (L)	03-NO2 /NO2	TOT N (PPM)	TOT C (PPM)
915	0.	0.0	0.015	1.105	0.145	0.0000	1.002	0.0	0.0	30.00	0.0	1.250	3.258
930	15.	0.0	0.020	1.009	0.230	0.0000	1.032	0.0000	0.0000	0.0000	0.0	1.240	0.0000
945	30.	0.0	0.030	0.934	0.312	0.0000	0.969	0.0	0.0000	0.0000	0.0	1.246	0.0000
1000	45.	0.0	0.040	0.842	0.381	0.0000	0.932	0.0000	0.0000	0.0000	0.0	1.224	0.0000
1015	60.	0.0	0.045	0.744	0.436	0.196	0.874	0.001	0.119	34.20	0.0	1.181	2.982
1030	75.	0.0	0.050	0.671	0.522	1.196	0.840	0.0000	0.0000	0.0000	0.0	1.165	0.0000
1045	90.	0.0	0.060	0.574	0.595	1.173	0.774	0.003	0.0000	0.0000	0.0	1.171	0.0000
1100	105.	0.0	0.070	0.478	0.648	1.145	0.740	0.0000	0.0000	0.0000	0.0	1.130	0.0000
1115	120.	0.0	0.075	0.408	0.711	1.119	0.699	0.007	0.263	34.00	0.0	1.126	3.791
1130	135.	0.002	0.085	0.334	0.749	1.080	0.649	0.0000	0.0000	0.0000	0.001	1.092	0.0000
1145	150.	0.007	0.090	0.269	0.789	1.065	0.616	0.012	0.0000	0.0000	0.002	1.070	0.0000
1200	165.	0.010	0.100	0.218	0.812	1.028	0.578	0.0000	0.0000	0.0000	0.003	1.049	0.0000
1215	180.	0.016	0.105	0.168	0.818	0.987	0.545	0.021	0.322	30.00	0.004	1.069	2.622
1230	195.	0.027	0.120	0.132	0.834	0.965	0.510	0.0000	0.0000	0.0000	0.004	0.996	0.0000
1245	210.	0.040	0.130	0.098	0.832	0.932	0.474	0.031	0.0000	0.0000	0.005	0.944	0.0000
1300	225.	0.066	0.150	0.073	0.826	0.901	0.437	0.0000	0.0000	0.0000	0.006	0.938	0.0000
1315	240.	0.083	0.165	0.070	0.817	0.873	0.399	0.041	0.402	34.00	0.007	0.931	2.420
1330	255.	0.105	0.175	0.048	0.792	0.840	0.370	0.0000	0.0000	0.0000	0.006	0.818	0.0000
1345	270.	0.123	0.195	0.046	0.766	0.812	0.337	0.047	0.0000	0.0000	0.007	0.864	0.0000
1400	285.	0.143	0.210	0.0267	0.7507	0.776	0.312	0.0000	0.0000	0.0000	0.005	0.840	0.0000
1415	300.	0.165	0.220	0.036	0.693	0.717	0.270	0.067	0.441	21.00	0.009	0.804	2.084
1430	315.	0.187	0.235	0.026	0.663	0.687	0.241	0.0000	0.0000	0.0000	0.007	0.770	0.0000
1445	330.	0.205	0.245	0.025	0.610	0.636	0.214	0.080	0.0000	0.0000	0.004	0.722	0.0000
1500	345.	0.221	0.255	0.024	0.583	0.604	0.191	0.0000	0.446	29.00	0.009	0.698	0.0000
1515	360.	0.238	0.270	0.022	0.550	0.569	0.171	0.088	0.0000	0.0000	0.009	0.667	1.493

0.0000 NO DATA TAKEN --- DATA DISCARDED ? QUESTIONABLE DATA

EC-60 PROPENE
EVACUABLE CHAMBER
1974 JULY 23

AVE SAMPLE TEMP(11) = 86.2
AVE SAMPLE TEMP(21) = 85.6
AVE WALL TEMP(11) = 80.5
AVE WALL TEMP(21) = 82.1
AVE RADION = 2.23
AVE RH = 54.5
AVE SOLAR SIMULATOR POWER = 20.7

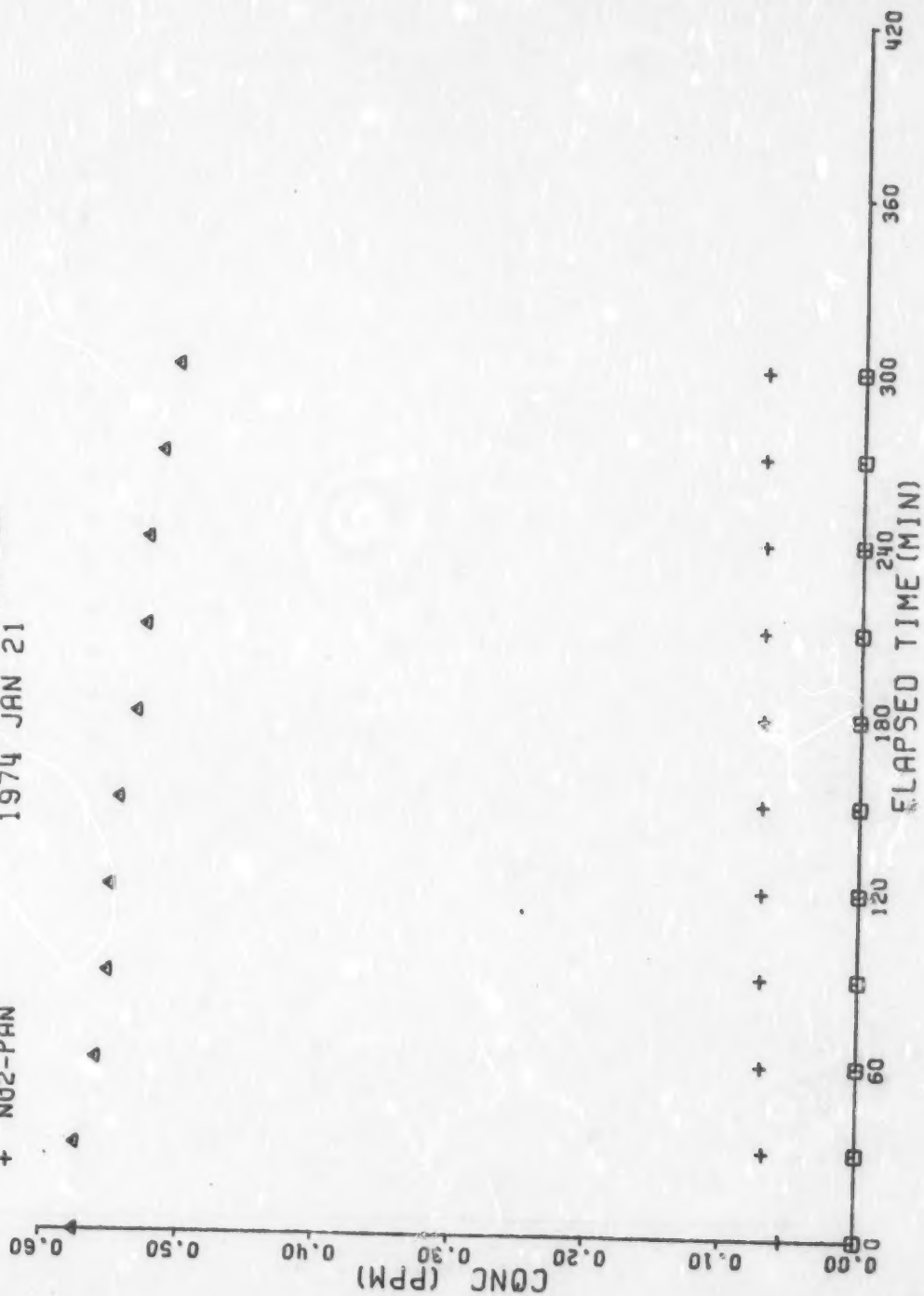
CLOCK TIME	ELAPSED TIME (MIN)	TS1 (DEG F)	TS2 (DEG F)	TH1 (DEG F)	TH2 (DEG F)	REL HUM (%)	SSPOWER (MW)	RADION (MW)	CO (PPM)	ACETALD (PPM)	PROPALD (PPM)	ACETONE (PPM)	CI-N (PPM)
915	0.	85.1	85.1	86.2	86.2	50.5	20.40	2.22	2.04	0.002	0.0010	0.002	0.0
920	15.	86.8	86.4	84.5	80.1	51.5	20.10	2.25	2.03	0.002	0.0010	0.002	0.0
925	30.	85.9	85.5	79.7	83.9	55.0	19.90	2.21	2.09	0.037	0.0010	0.003	0.0
1000	45.	86.4	85.8	81.1	81.6	56.0	20.60	2.22	2.12	0.108	0.0020	0.006	0.0
1015	60.	86.6	85.8	81.1	83.3	56.0	20.70	2.22	2.14	0.108	0.0020	0.006	0.0
1030	75.	86.1	85.3	78.5	82.4	56.0	20.80	2.25	2.16	0.178	0.0020	0.009	0.0
1045	90.	85.8	85.0	79.2	82.2	57.0	21.00	2.27	2.21	0.191	0.0020	0.010	0.0
1100	105.	86.0	85.2	80.2	83.2	57.5	20.60	2.22	2.25	0.191	0.0020	0.010	0.0
1115	120.	86.4	85.6	80.9	82.3	56.0	20.70	2.24	2.26	0.256	0.0020	0.012	0.0010
1130	135.	86.6	85.9	81.5	81.7	55.0	21.10	2.26	2.29	0.256	0.0020	0.012	0.0010
1145	150.	86.3	85.6	79.4	81.7	55.0	20.70	2.21	2.35	0.285	0.0030	0.014	0.0020
1200	165.	85.6	85.0	79.0	81.7	55.0	20.40	2.20	2.39	0.317	0.0050	0.016	0.0020
1215	180.	86.0	85.3	80.3	81.9	55.0	20.70	2.19	2.44	0.317	0.0050	0.016	0.0020
1230	195.	86.4	85.7	81.0	82.0	54.5	20.20	2.19	2.46	0.336	0.0060	0.015	0.0030
1245	210.	86.5	85.9	81.5	82.2	53.0	20.60	2.22	2.53	0.336	0.0060	0.015	0.0030
1300	225.	87.0	86.3	81.7	82.2	53.0	20.60	2.22	2.57	0.336	0.0060	0.015	0.0030
1315	240.	86.0	85.0	78.4	81.4	53.5	21.40	2.20	2.57	0.336	0.0060	0.015	0.0030
1330	255.	85.9	85.2	75.7	81.1	54.5	20.70	2.22	2.57	0.336	0.0060	0.015	0.0030
1345	270.	86.1	85.4	79.4	79.9	54.5	20.60	2.21	2.60	0.336	0.0060	0.015	0.0030
1400	285.	86.3	85.3	80.3	81.0	54.5	21.20	2.22	2.65	0.336	0.0060	0.015	0.0030
1415	300.	86.9	86.0	80.9	81.6	54.0	21.20	2.25	2.70	0.304	0.0050	0.021	0.0040
1430	315.	86.3	85.7	79.0	81.2	53.0	21.20	2.25	2.74	0.304	0.0050	0.021	0.0040
1445	330.	86.4	85.6	80.1	81.5	53.0	20.80	2.25	2.78	0.304	0.0050	0.021	0.0040
1500	345.	86.7	86.0	80.8	81.8	53.0	20.80	2.24	2.81	0.304	0.0050	0.021	0.0040
1515	360.	86.0	85.3	78.7	81.3	52.5	20.80	2.26	2.88	0.240	0.0050	0.019	0.0040

***** NO DATA TAKEN ***** DATA DISCARDED ? QUESTIONABLE DATA

APPENDIX D
Data Plots

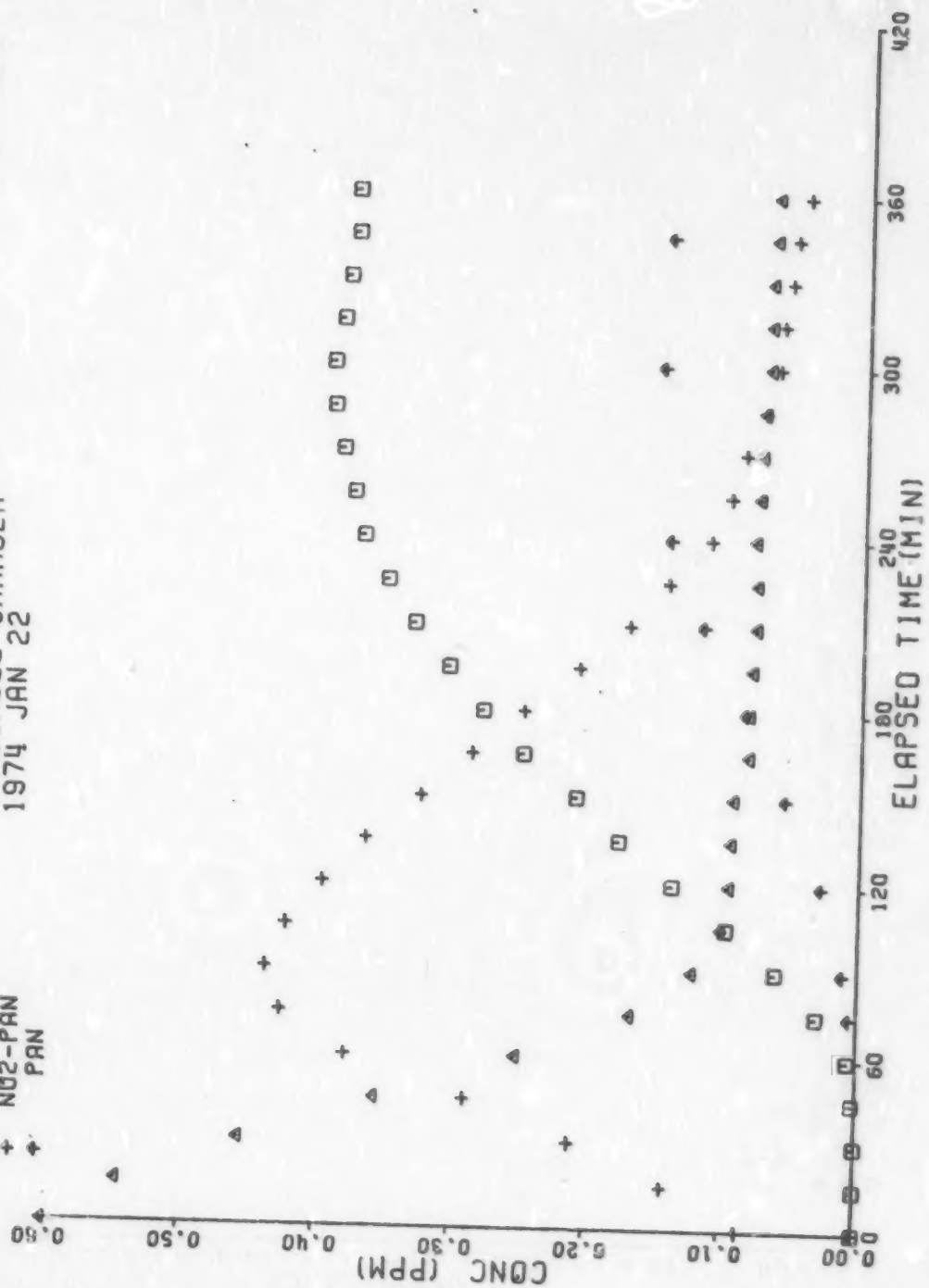
EC-1 DARK
EVACUABLE CHAMBER
1974 JAN 21

□ OZONE
△ NO
+ NO2-PAN



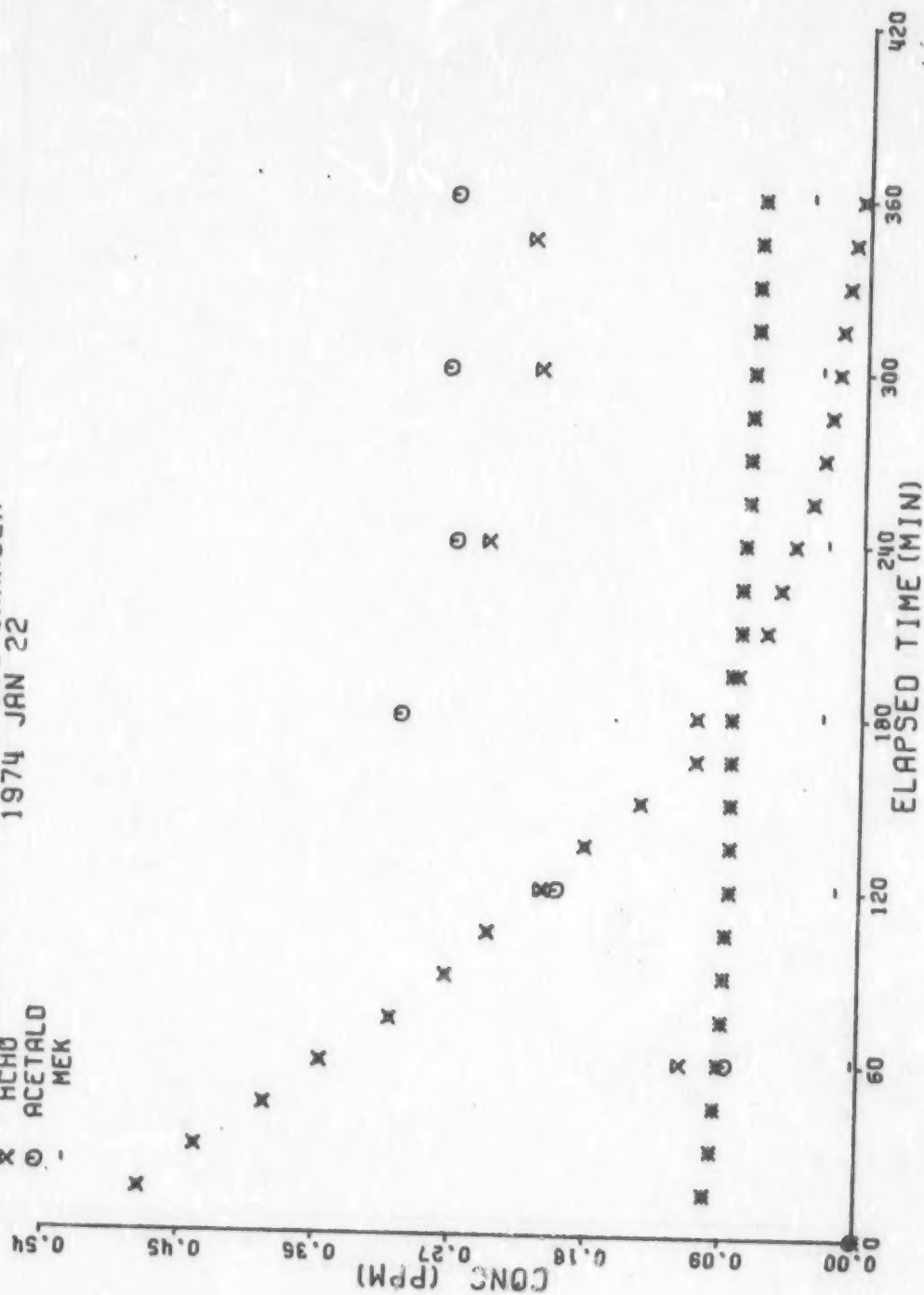
EC-2 PROPENE-BUTANE
EVACUABLE CHAMBER
1974 JAN 22

OZONE
 NO
 NO2-PAN
 PAN



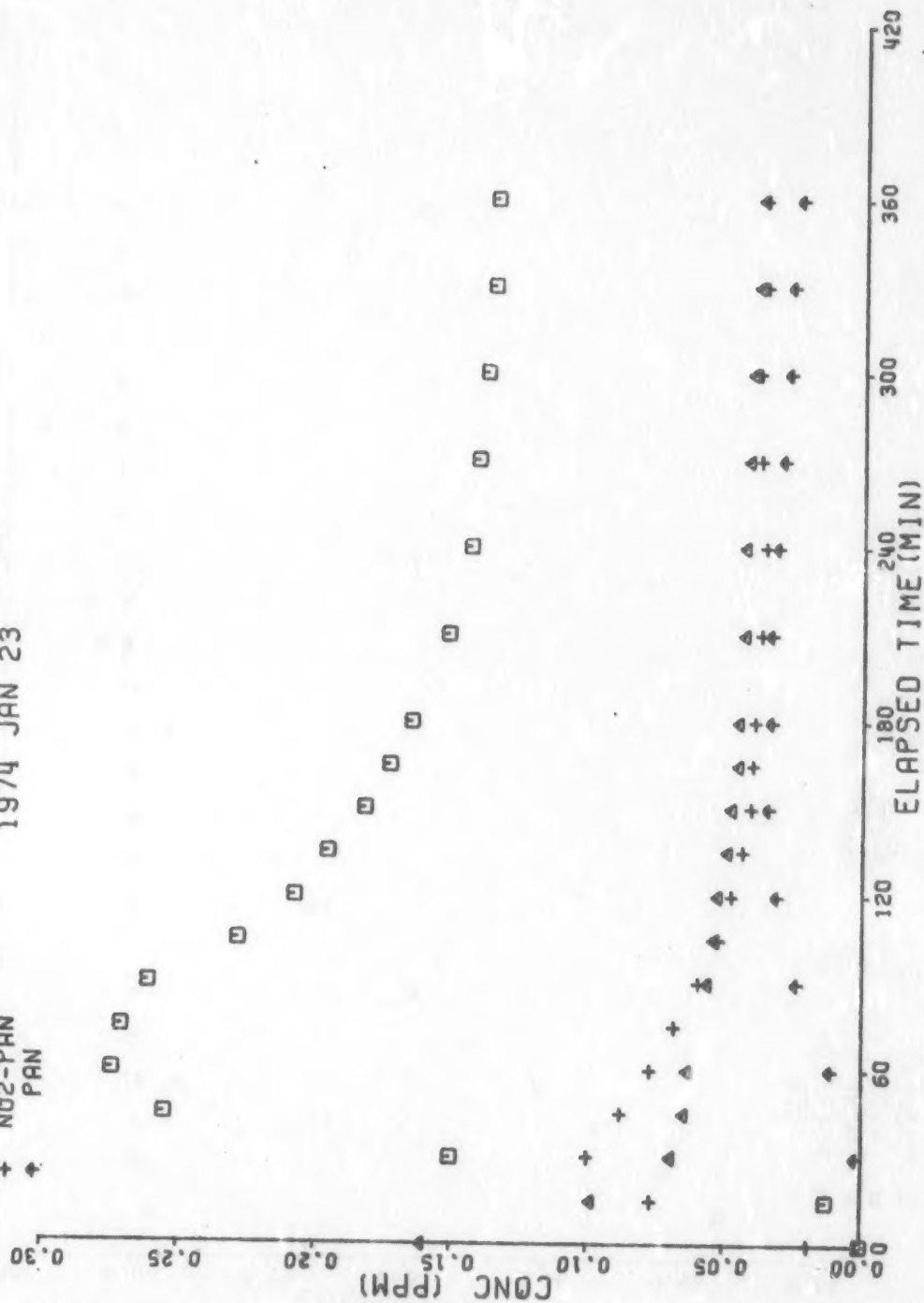
EC-2 PROPENE-BUTANE
EVACUABLE CHAMBER
1974 JAN 22

PROPENE /S
N-C4
HCHO
ACETALD
MEK



EC-3 PROPENE
EVACUABLE CHAMBER
1974 JAN 23

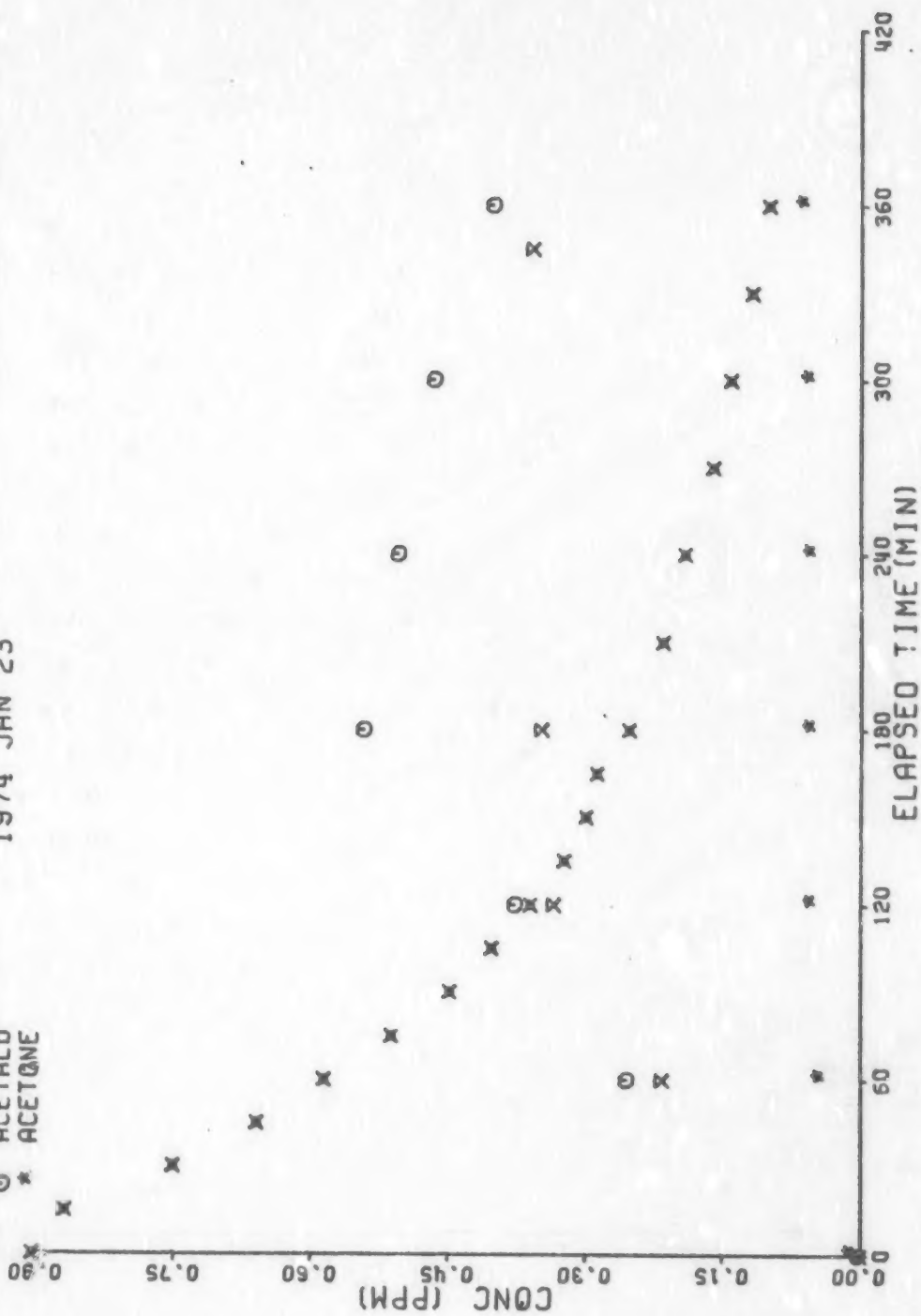
CZONE
NO
NO2-PAN
PAN



EC-3 PROPENE
EVACUABLE CHAMBER
1974 JAN 23

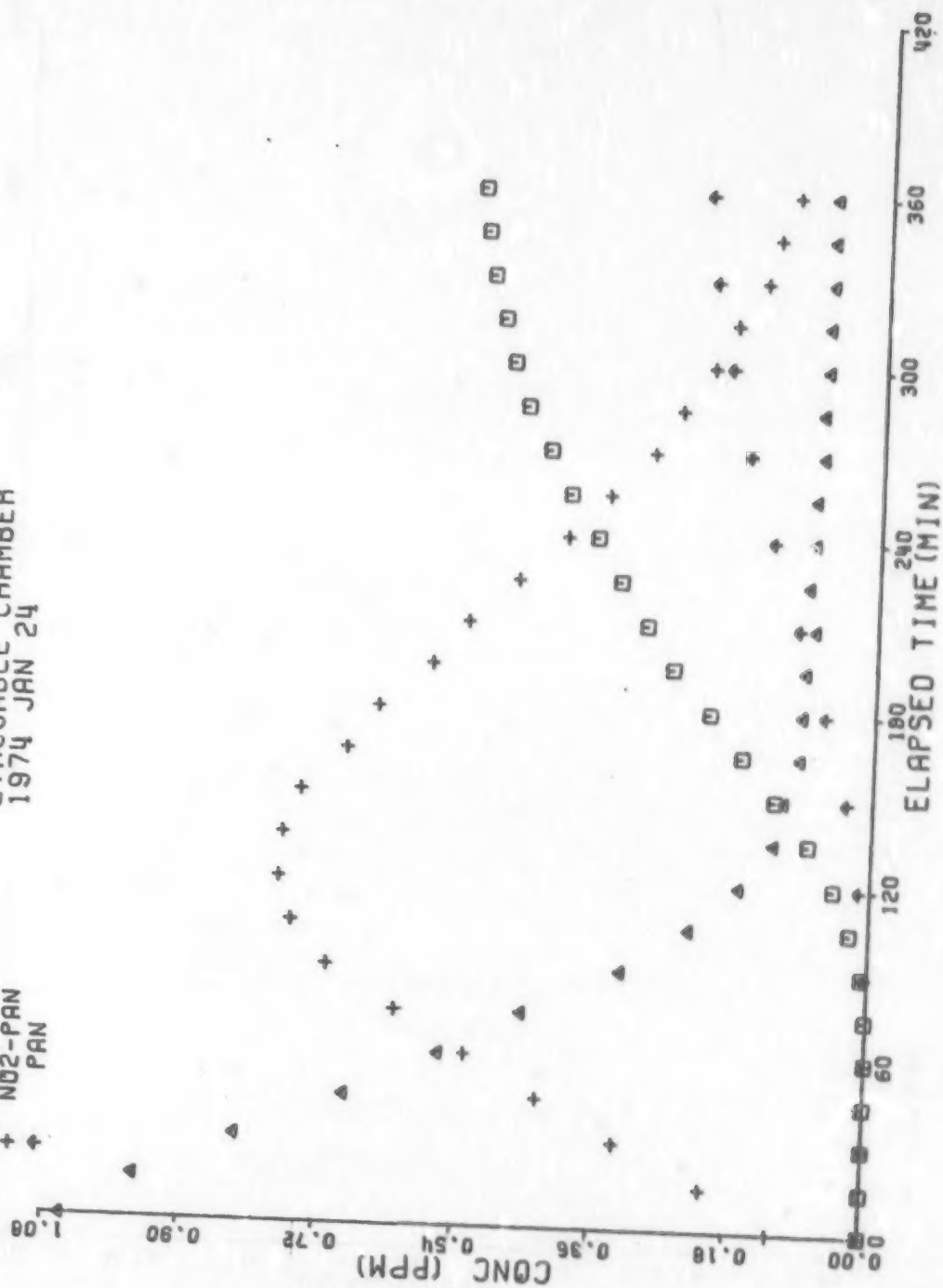
PROPENE
HCHO
ACETALD
ACETONE

x x o *



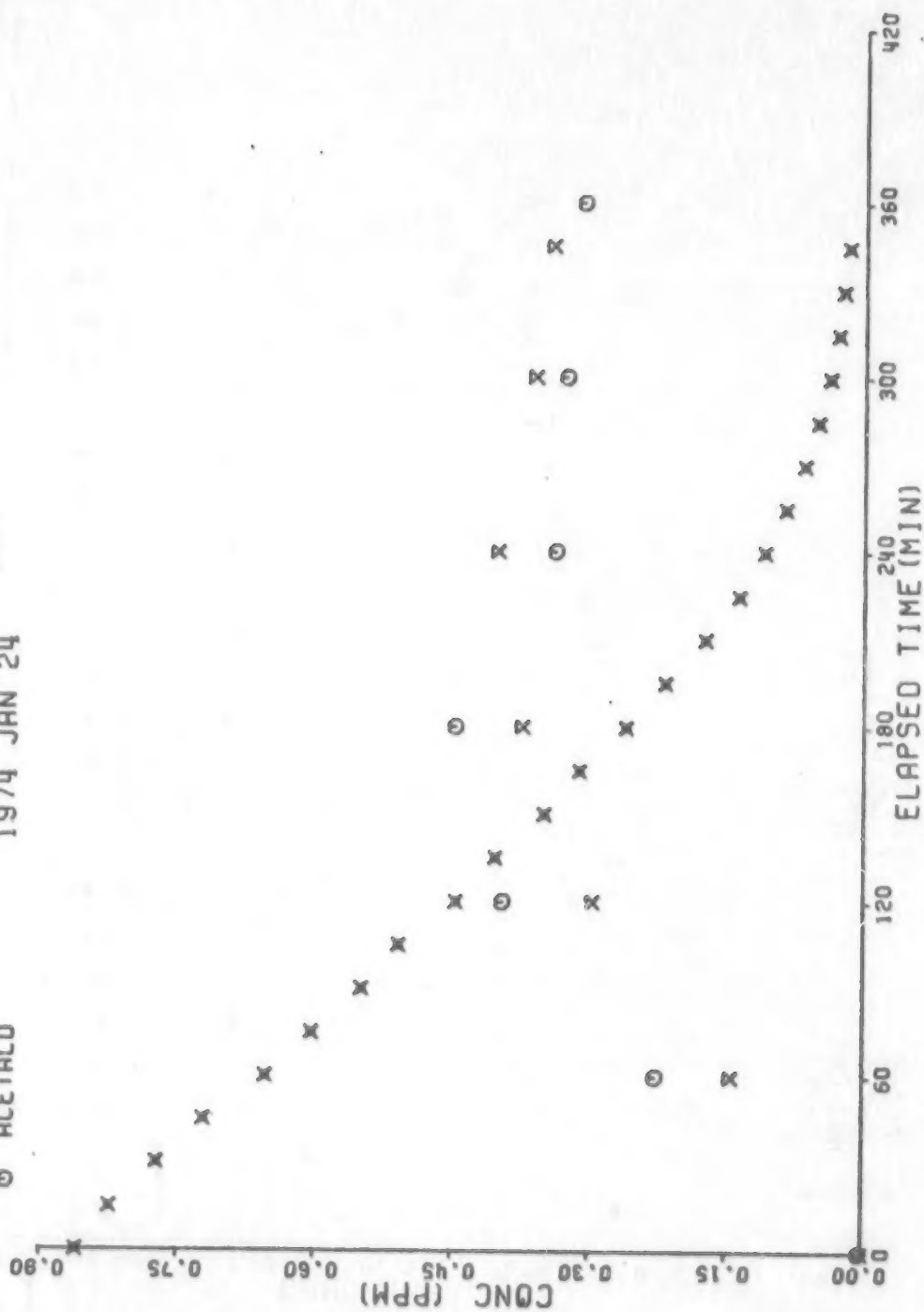
EC-4 PROPENE
EVACUABLE CHAMBER
1974 JAN 24

□ OZONE
△ NO
+ NO2-PAN
△ PAN



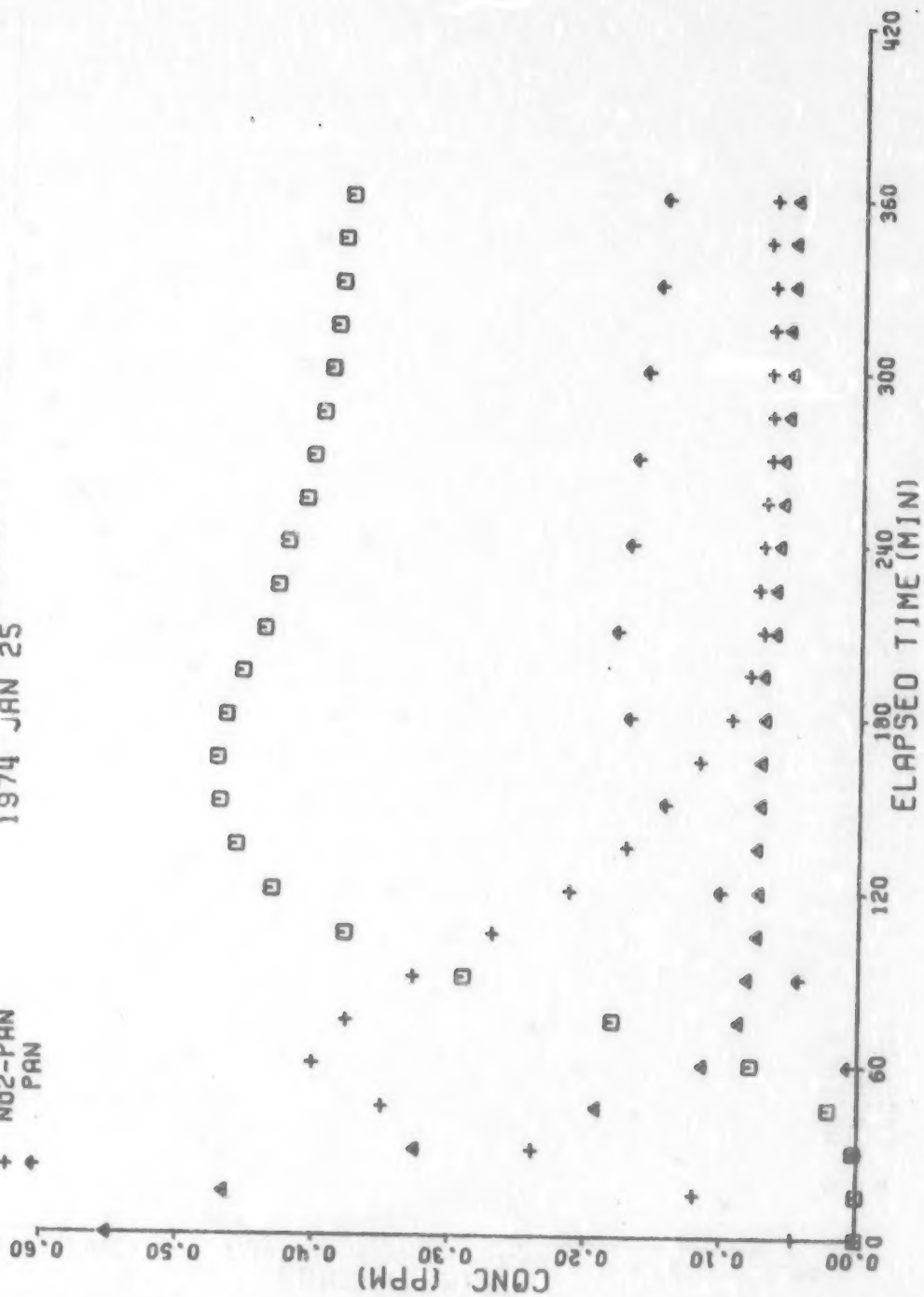
EC-4 PROPENE
EVACUABLE CHAMBER
1974 JAN 24

x PROPENE
x HCHO
o ACETALD



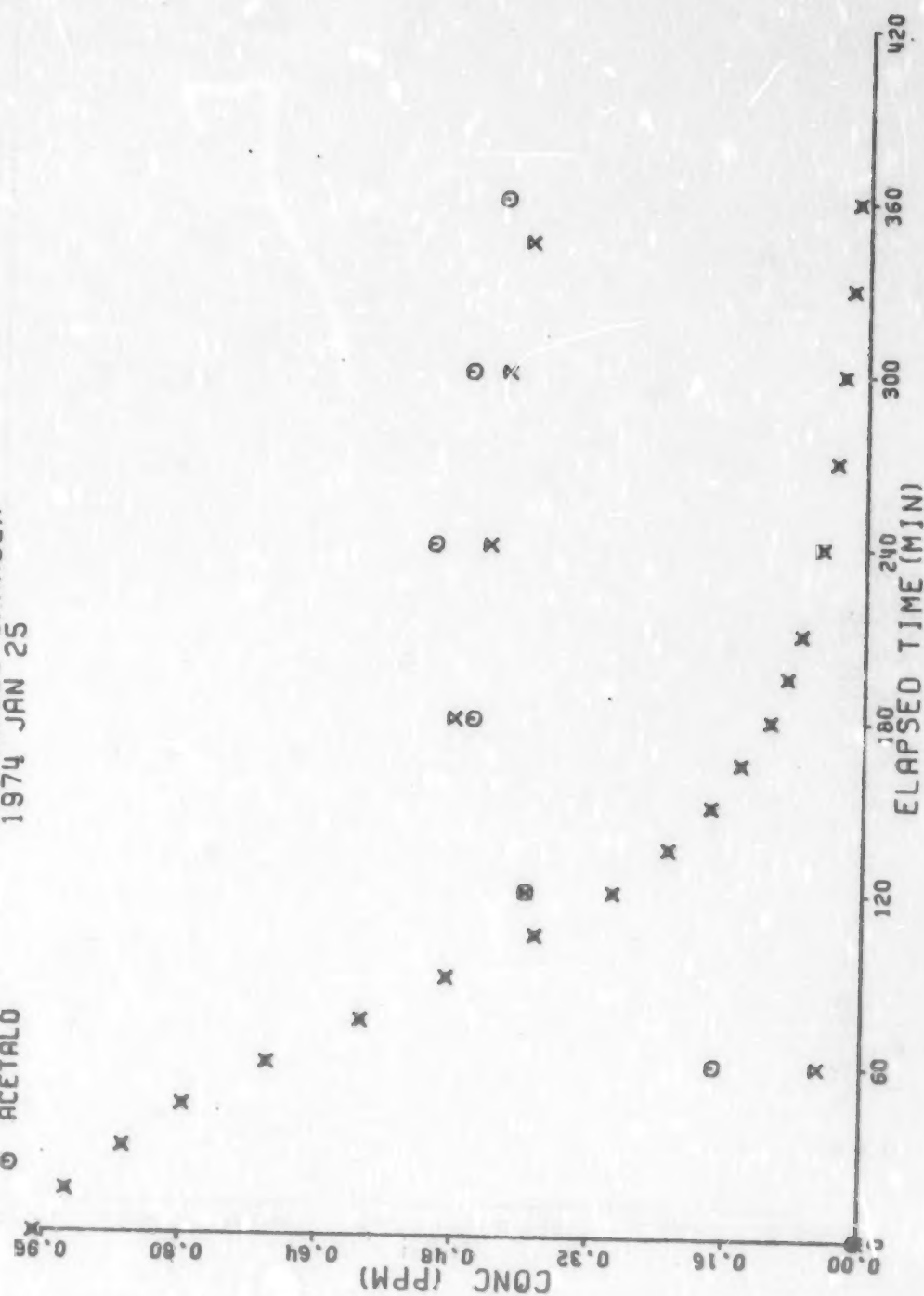
EC-5 PROPENE
EVACUABLE CHAMBER
1974 JAN 25

□ OZONE
▲ NO
+ NO2-PAN
♦ PAN



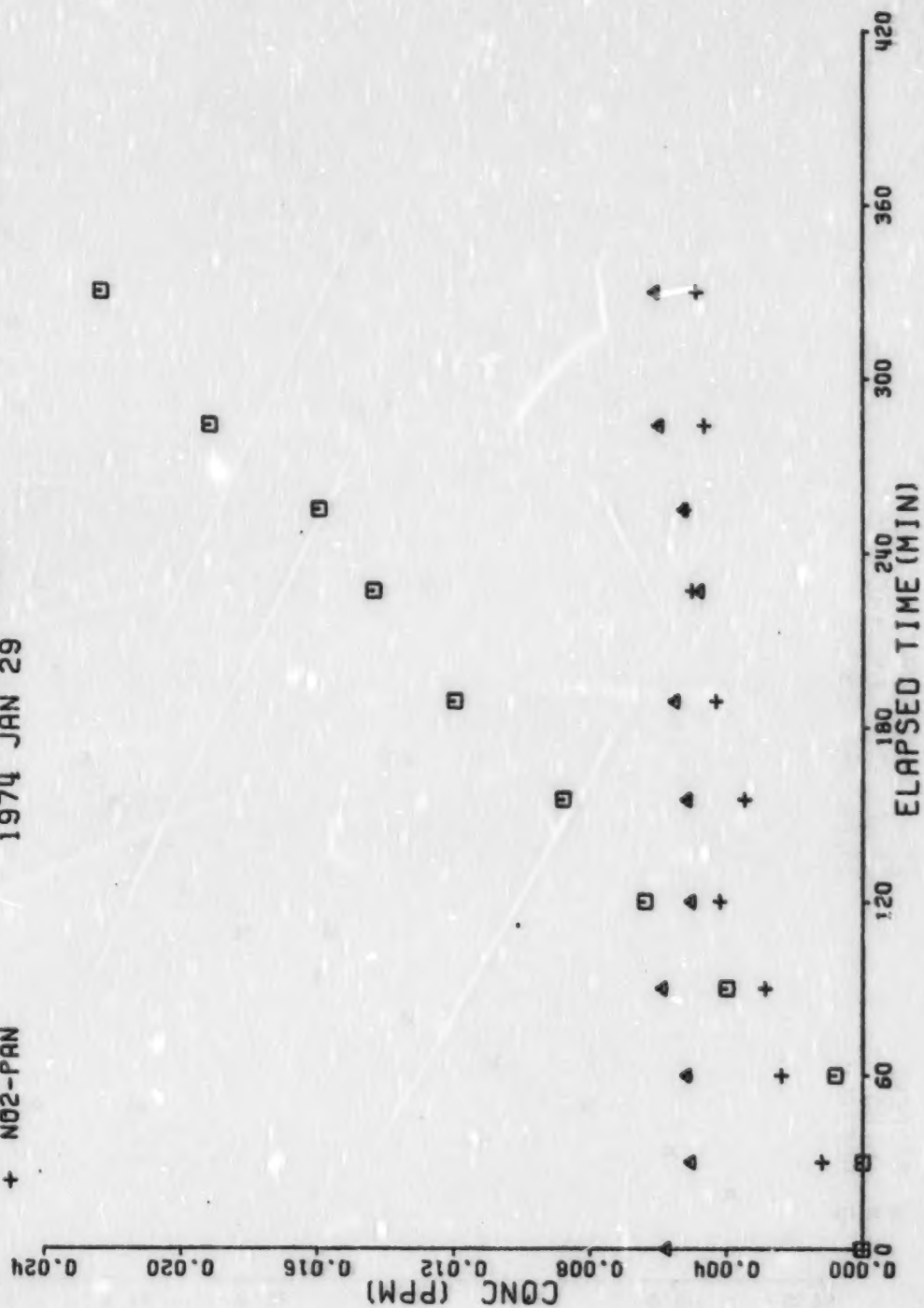
PROPENE
 X X HCHO
 X X ACETALD
 O

EC-5 PROPENE
 EVACUABLE CHAMBER
 1974 JAN 25



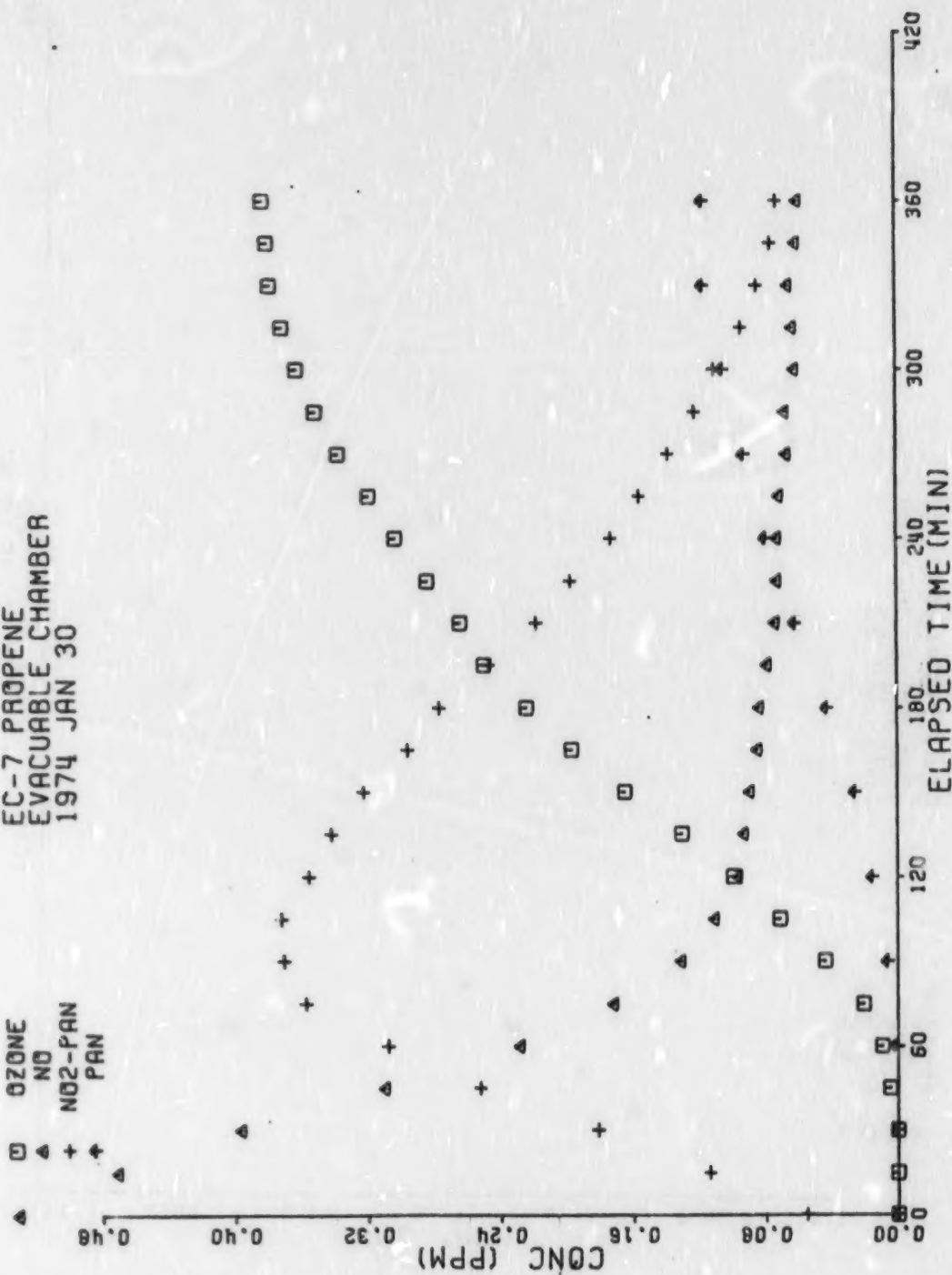
EC-6 NITROGEN
EVACUABLE CHAMBER
1974 JAN 29

□ OZONE
 ▲ NO
 + NO2-PAN



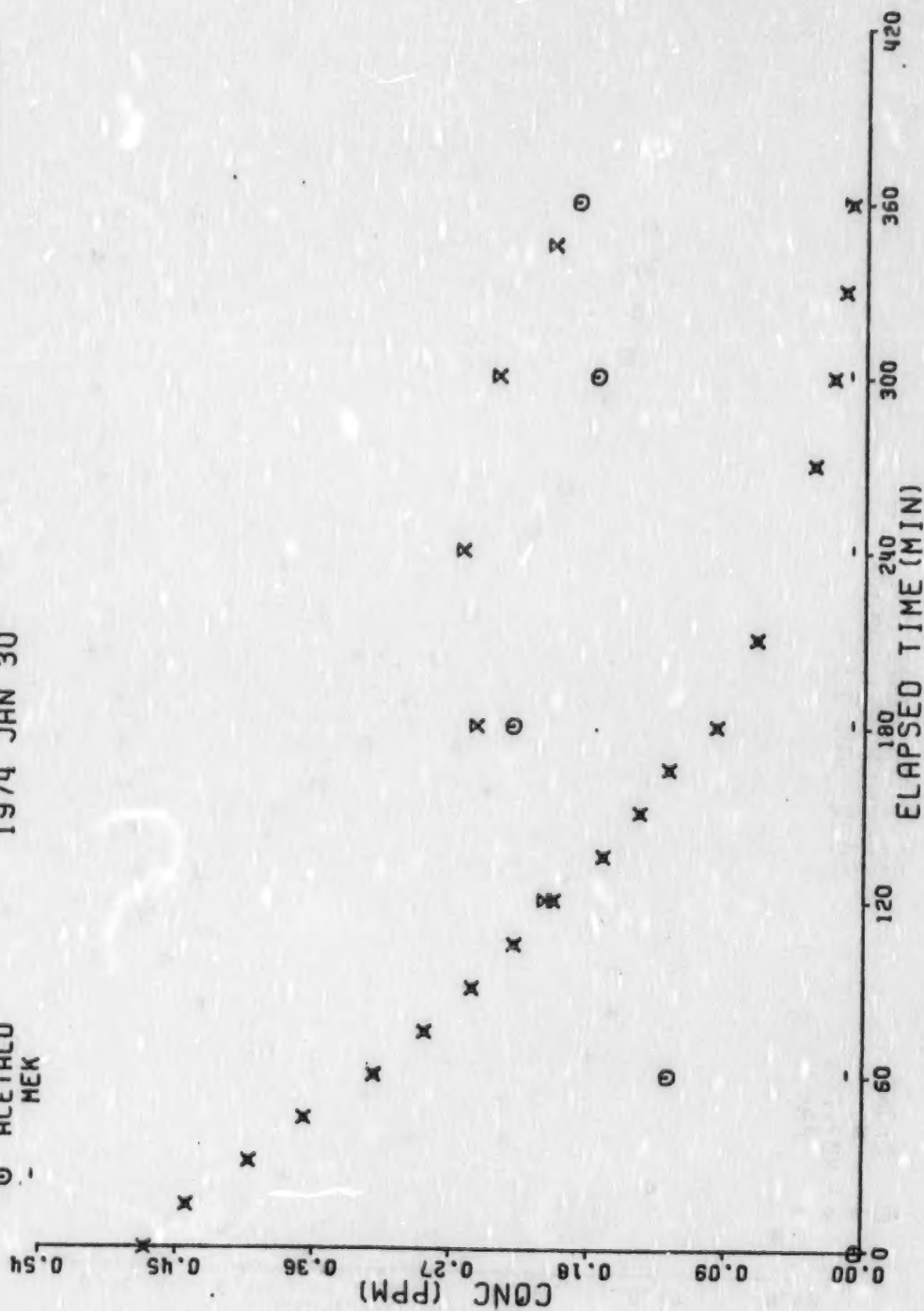
EC-7 PROPENE
EVACUABLE CHAMBER
1974 JAN 30

OZONE
NO
NO2-PAN
PAN



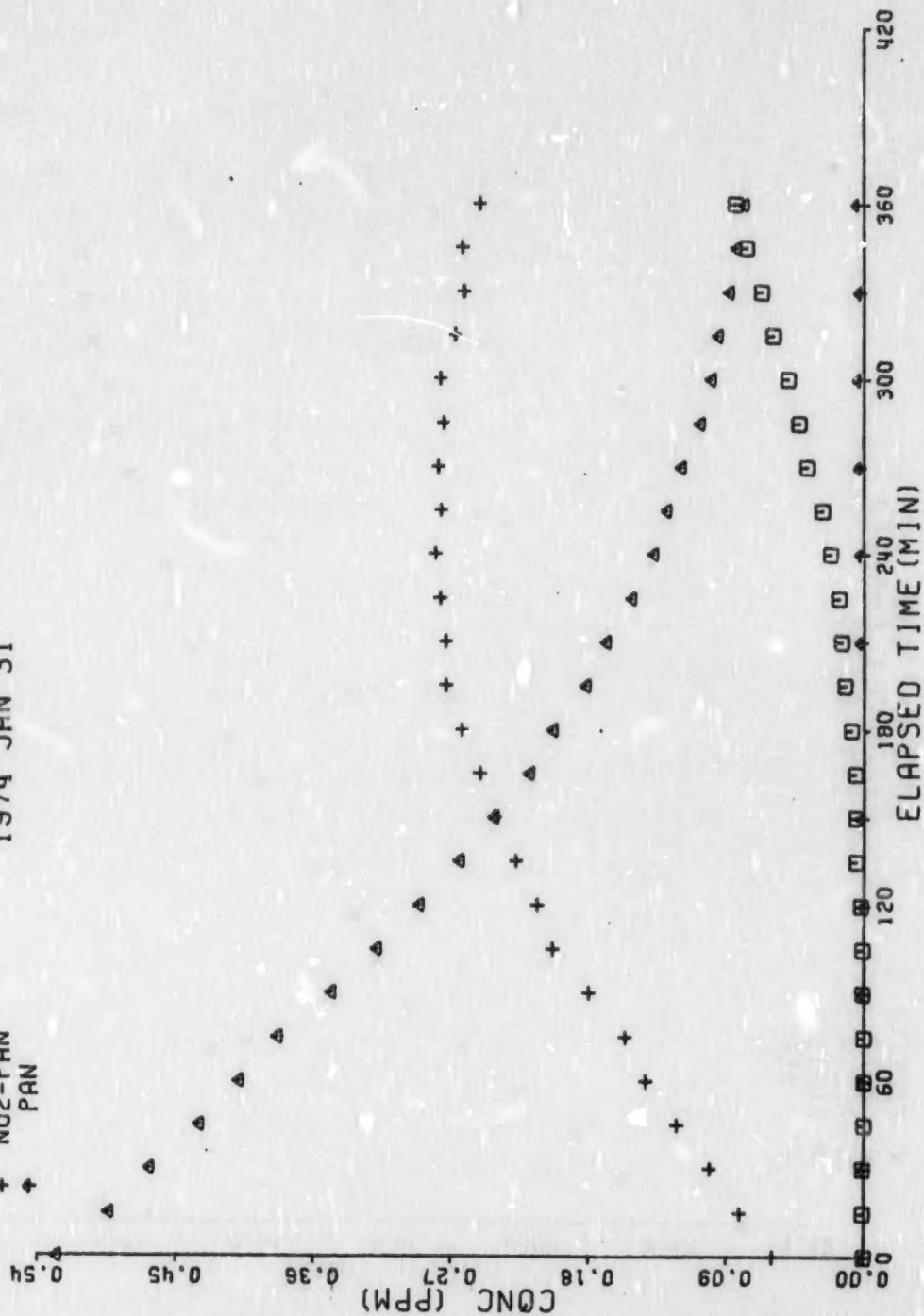
EC-7 PROPENE
EVACUABLE CHAMBER
1974 JAN 30

PROPENE
HCHO
ACETALD
MEK



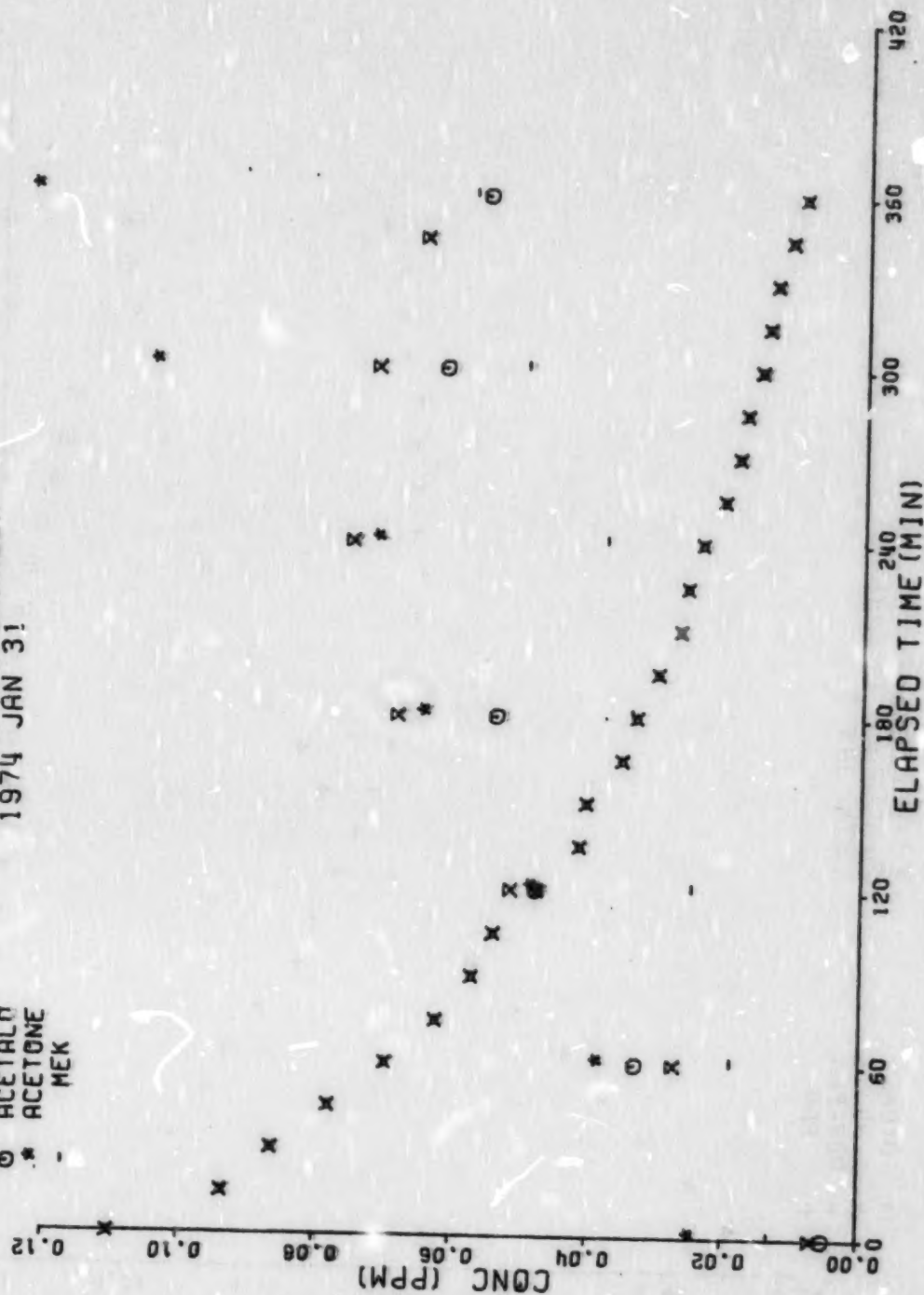
EC-8 PROPENE
EVACUABLE CHAMBER
1974 JAN 31

□ OZONE
△ NO
+ NO2-PAN
+ PAN



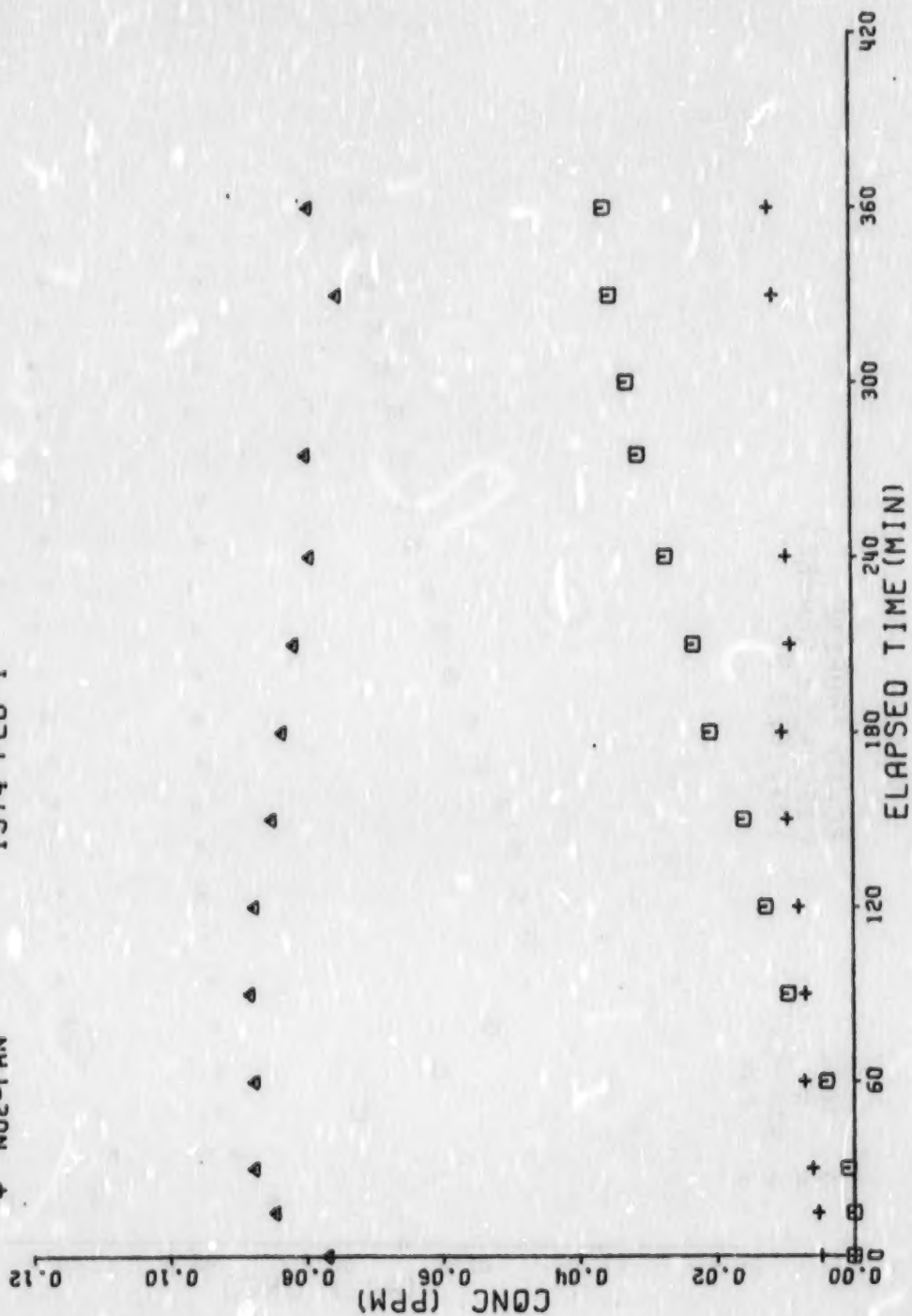
EC-8 PROPENE
EVACUABLE CHAMBER
1974 JAN 31

PROPENE
HCHO
ACETALD
ACETONE
MEK



EC-9 PURE AIR
EVACUABLE CHAMBER
1974 FEB 1

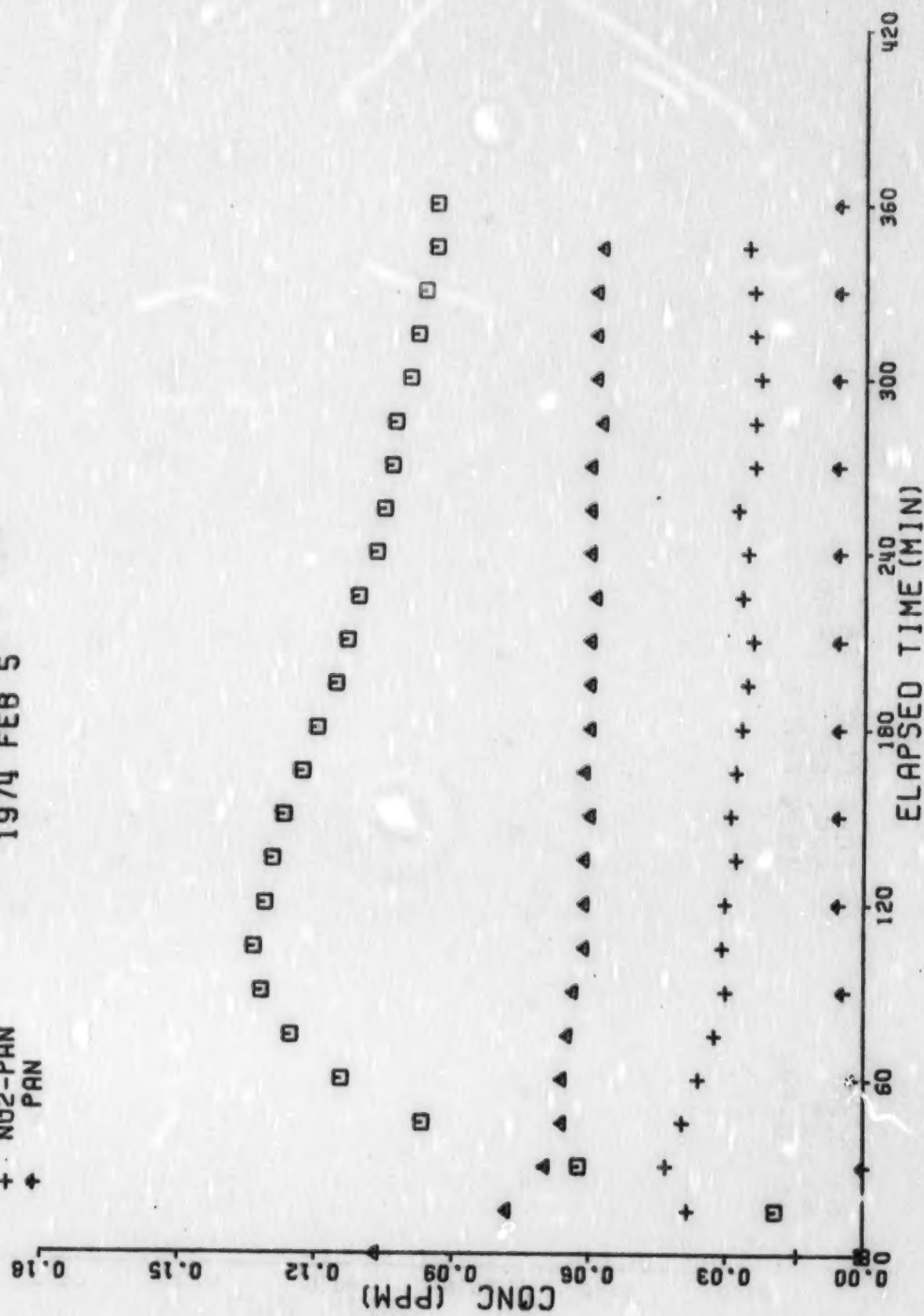
□ OZONE
△ NO
+ NO2-PAN



EC-10 PROPENE
EVACUABLE CHAMBER
1974 FEB 5

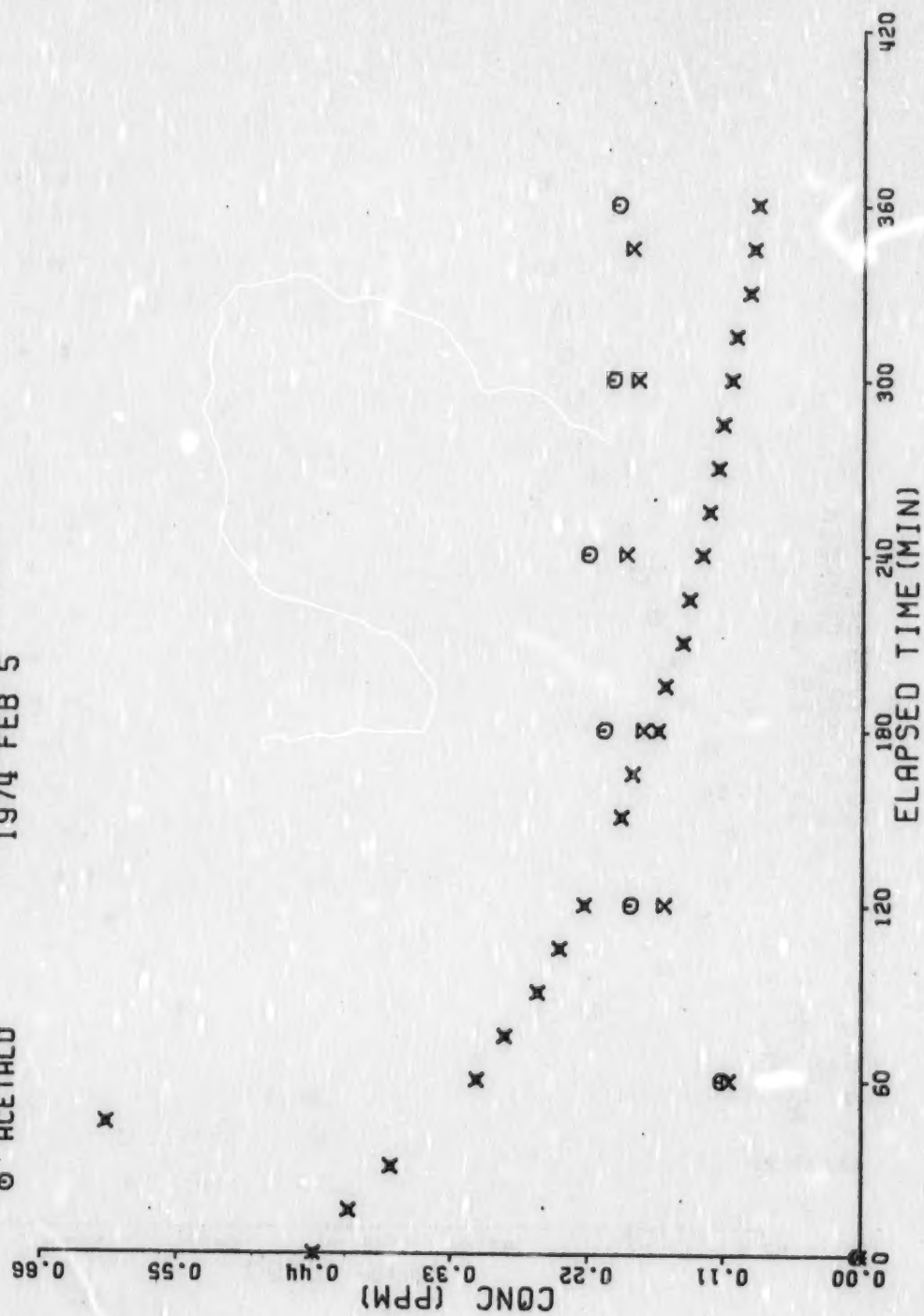
OZONE
NO
NO2-PAN
PAN

□ ▲ +



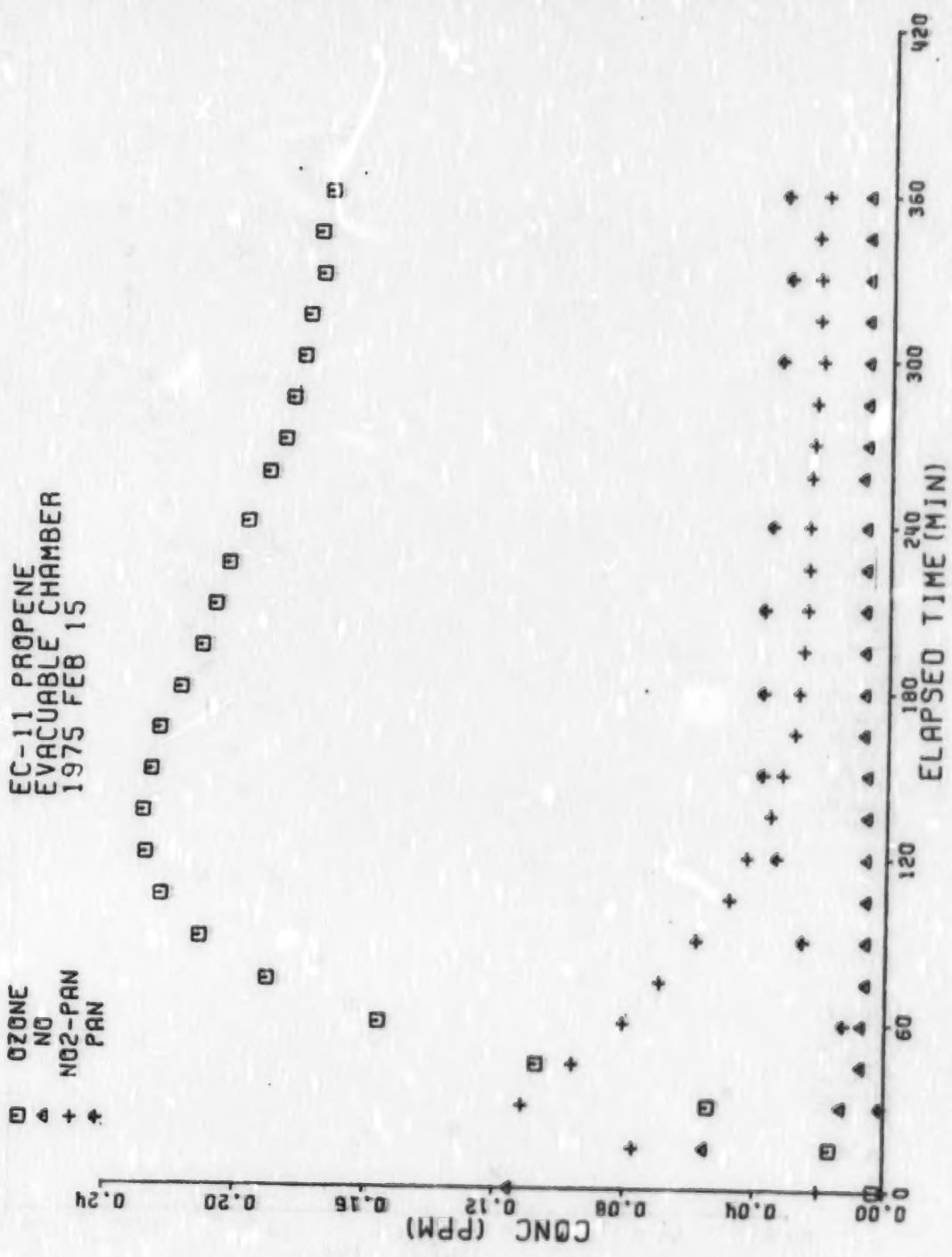
EC-10 PROPENE
EVACUABLE CHAMBER
1974 FEB 5

PROPENE
HCHO
ACETALD



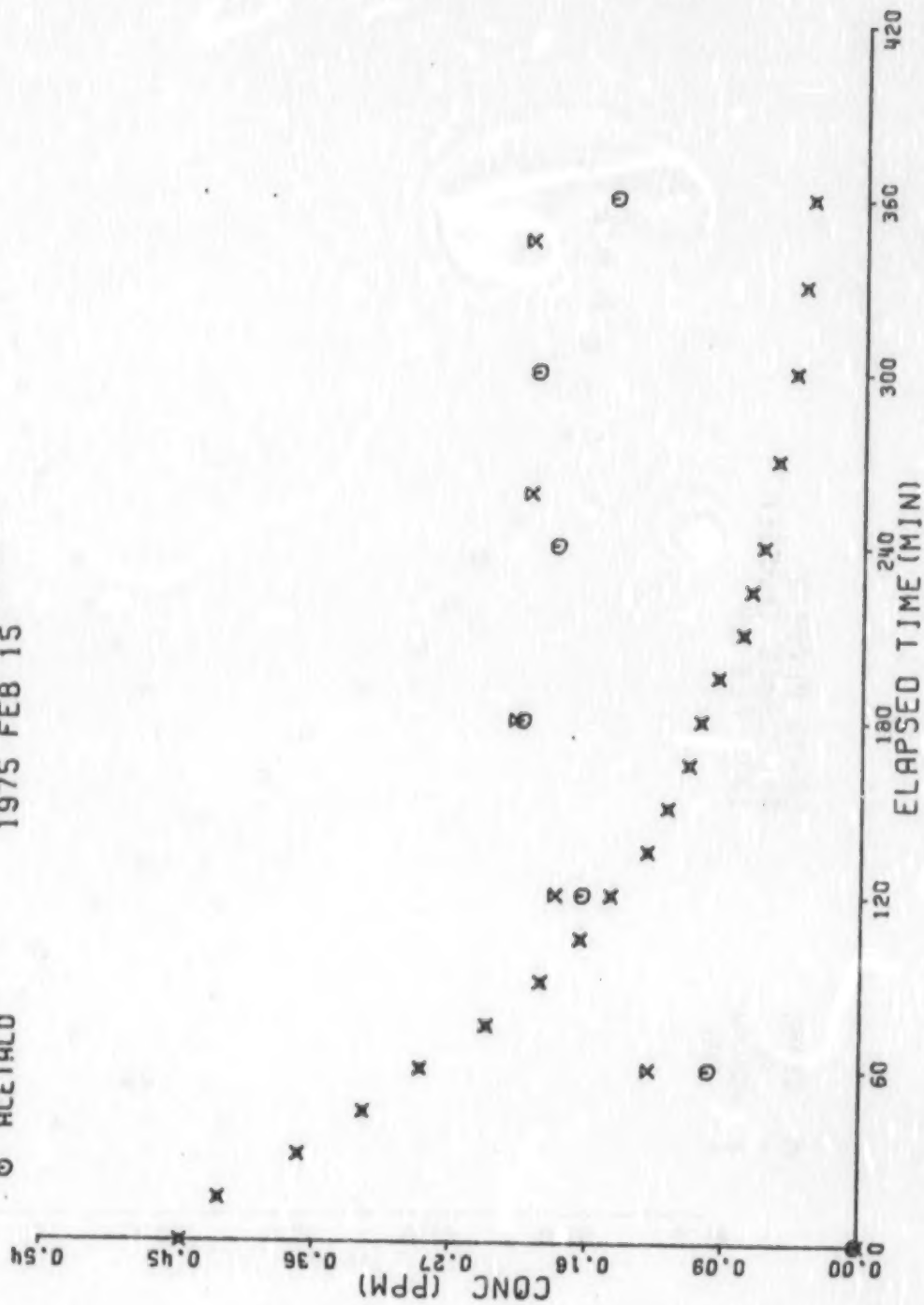
EC-11 PROPENE
EVACUABLE CHAMBER
1975 FEB 15

OZONE
NO
NO2-PAN
PAN



EC-11 PROPENE
EVACUABLE CHAMBER
1975 FEB 15

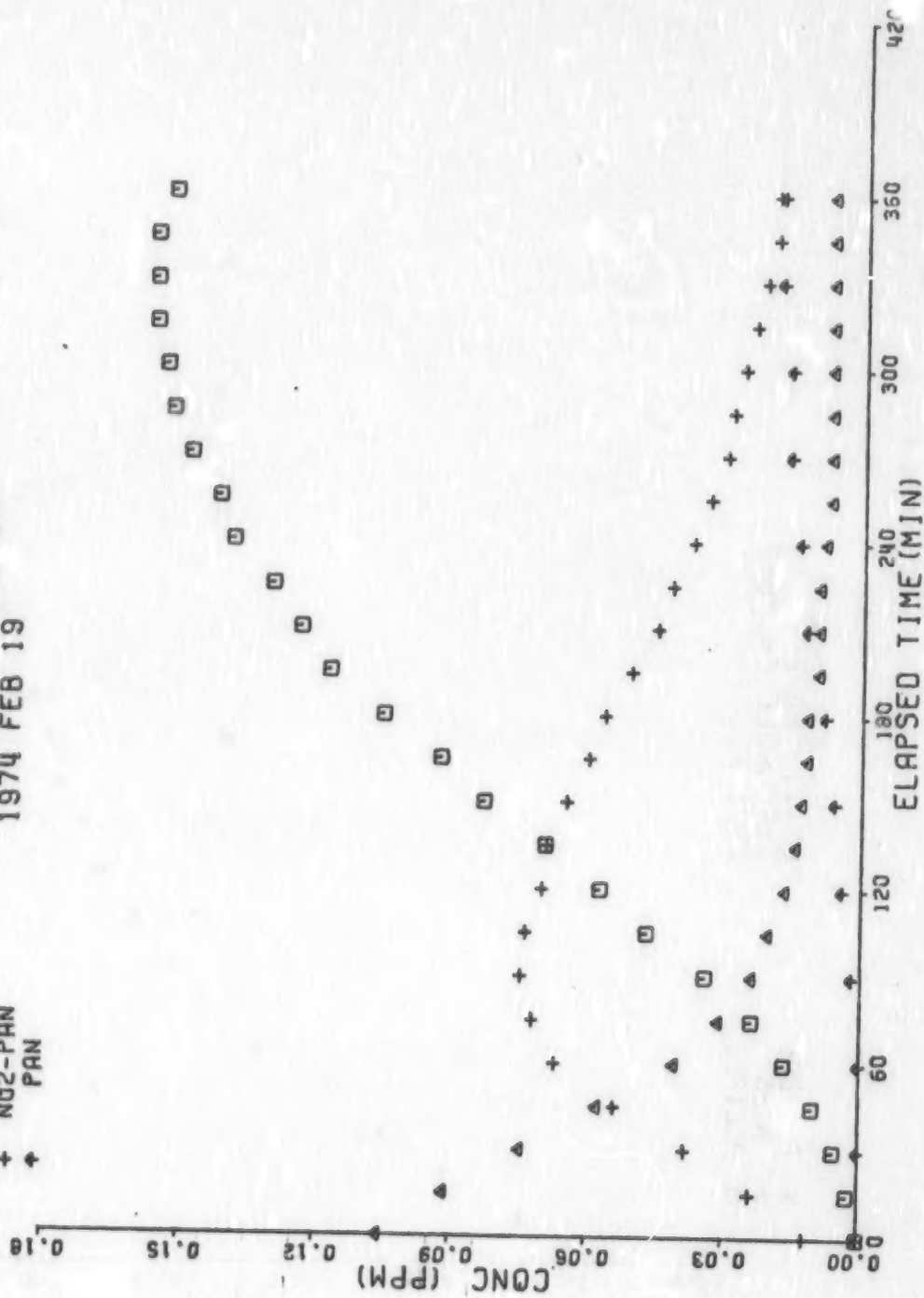
PROPENE
HCHO
ACETALD



EC-12 PROPENE
EVACUABLE CHAMBER
1974 FEB 19

OZONE
NO
NO2-PAN
PAN

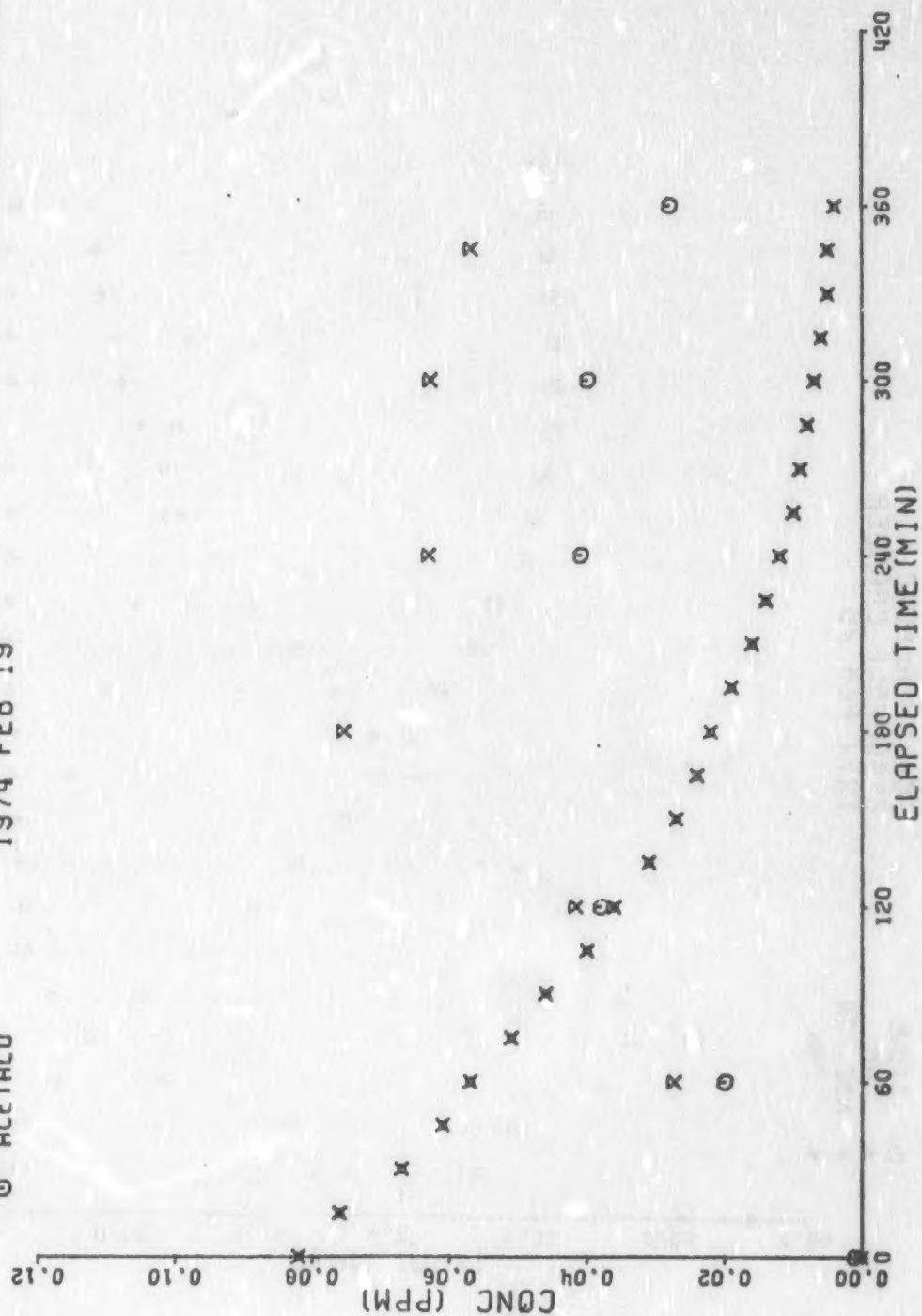
□ ▲ + +



EC-12 PROPENE
EVACUABLE CHAMBER
1974 FEB 19

PROPENE
HCHO
ACETALD

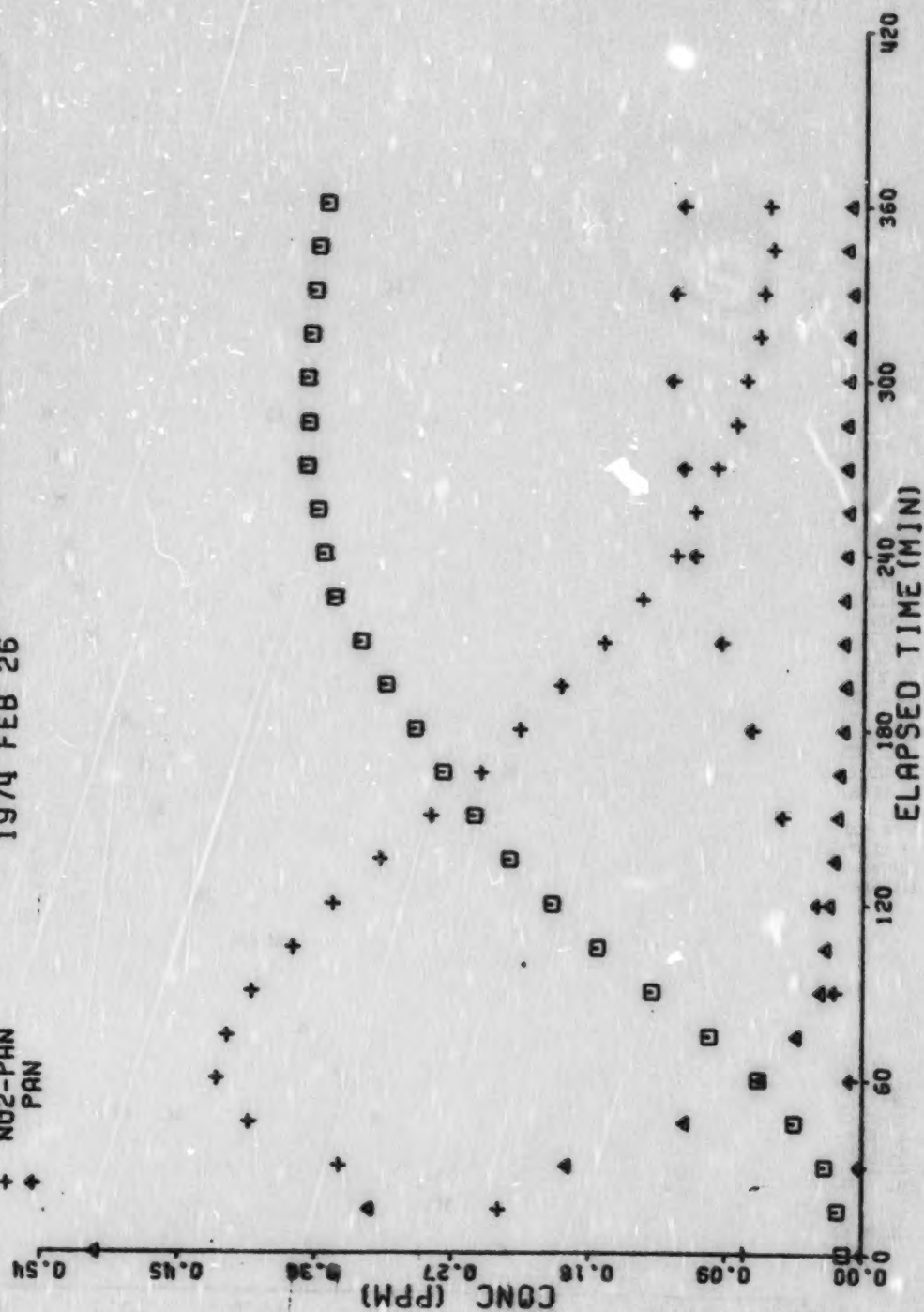
x x o



EC-13 PROPENE
EVACUABLE CHAMBER
1974 FEB 26

OZONE
NO
NO2-PAN
PAN

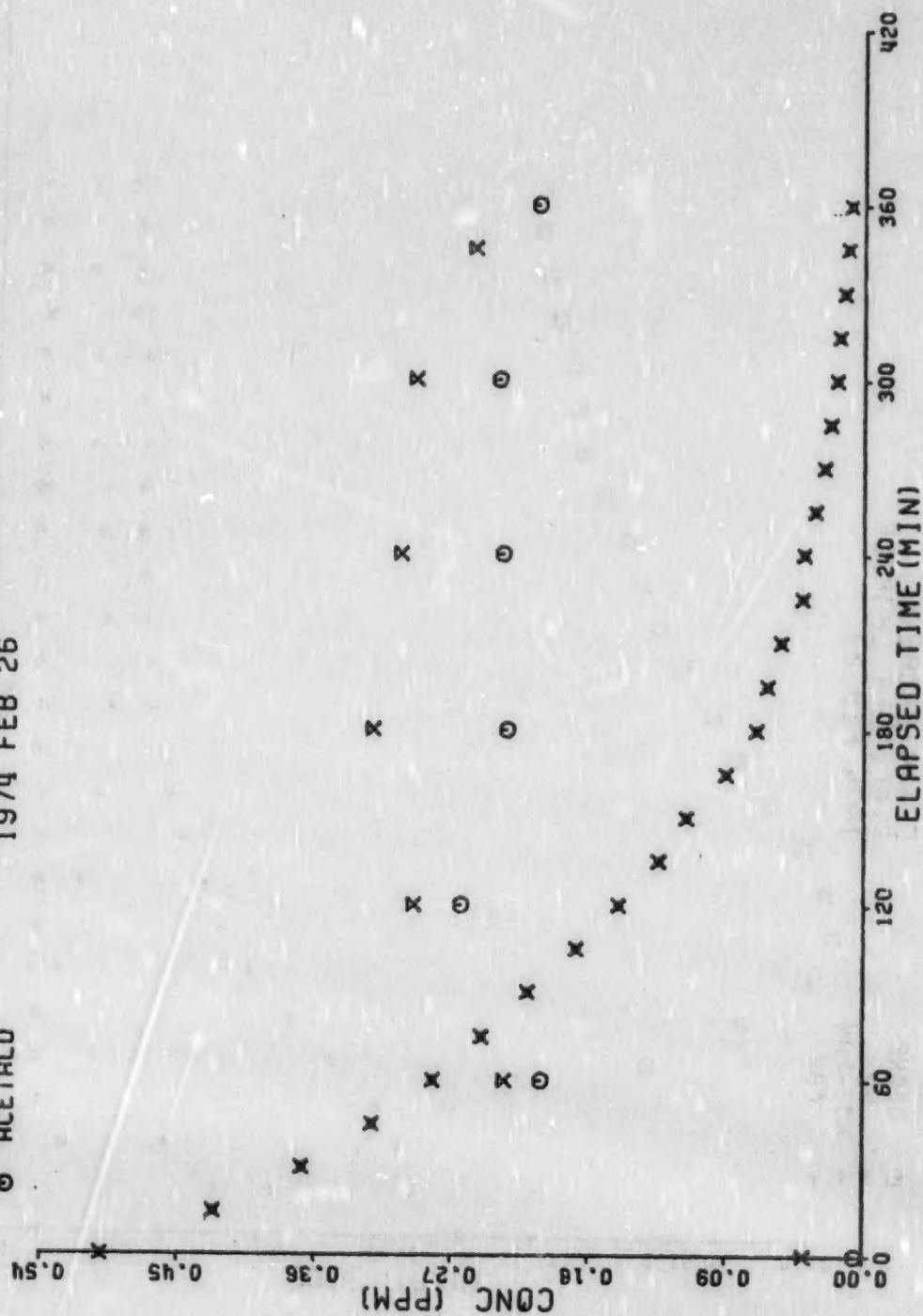
□ ▲ +



EC-13 PROPENE
EVACUABLE CHAMBER
1974 FEB 26

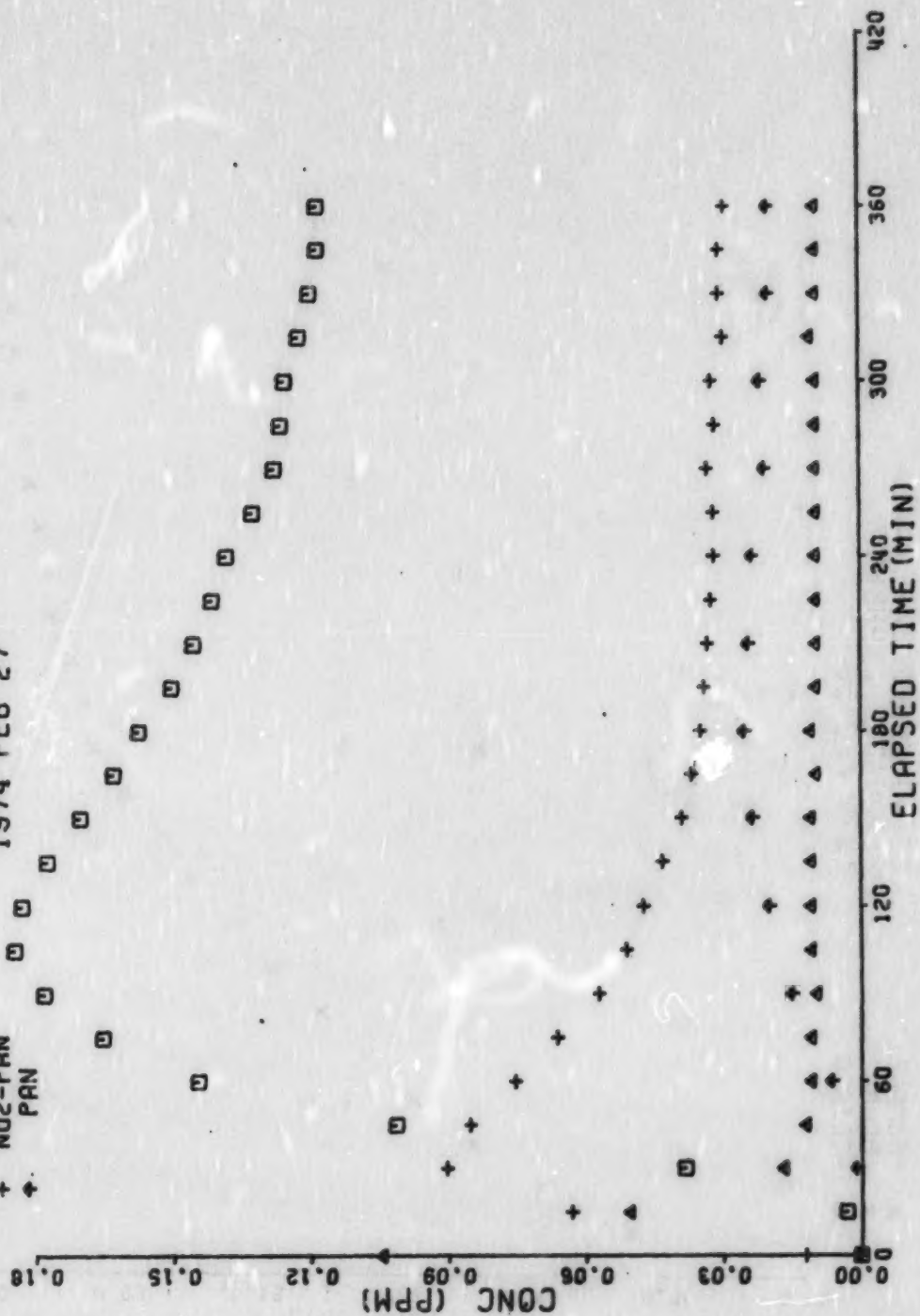
PROPENE
HCHO
ACETALD

x x o



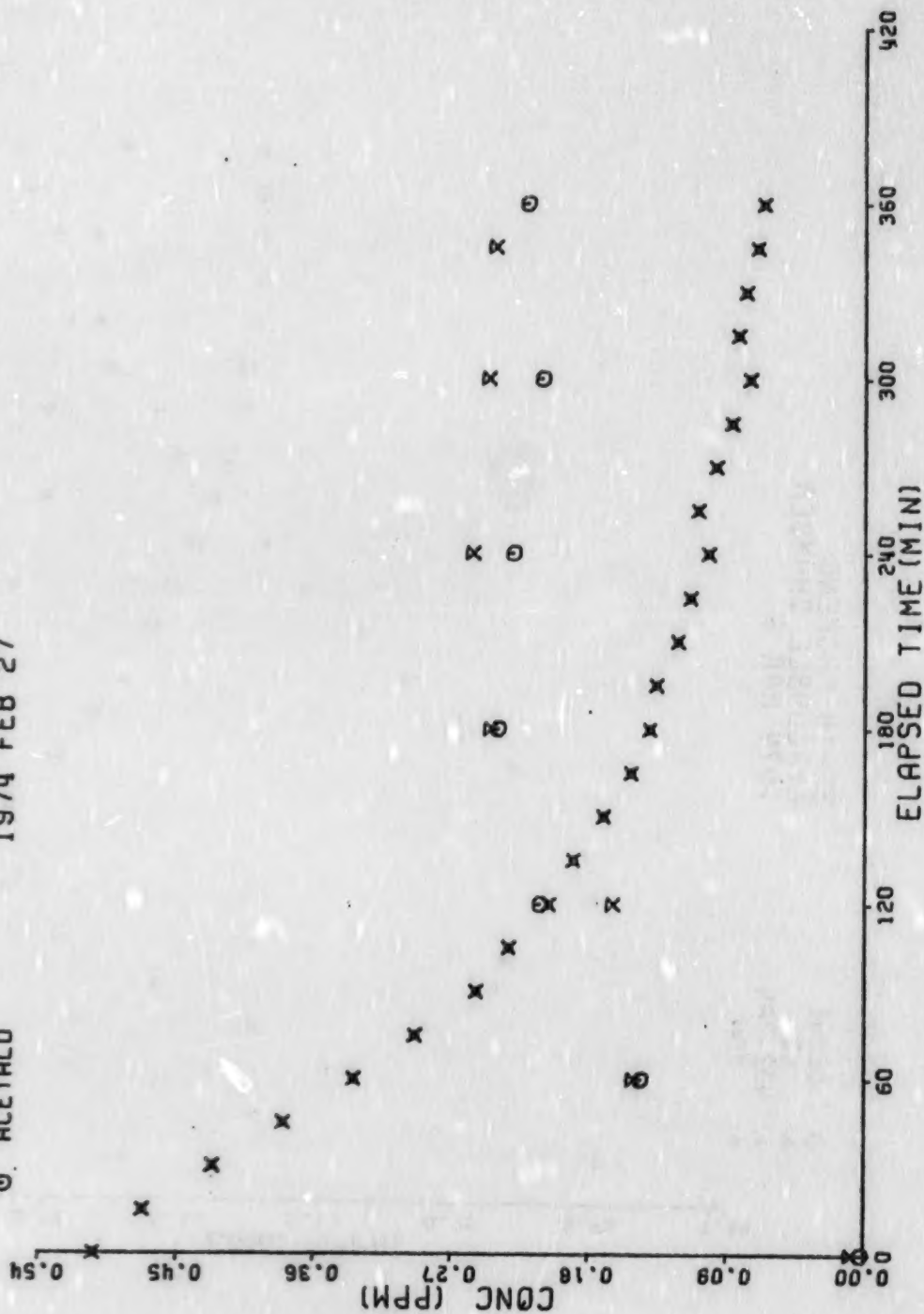
EC-14 PROPENE
EVACUABLE CHAMBER
1974 FEB 27

OZONE
NO
NO2-PAN
PAN



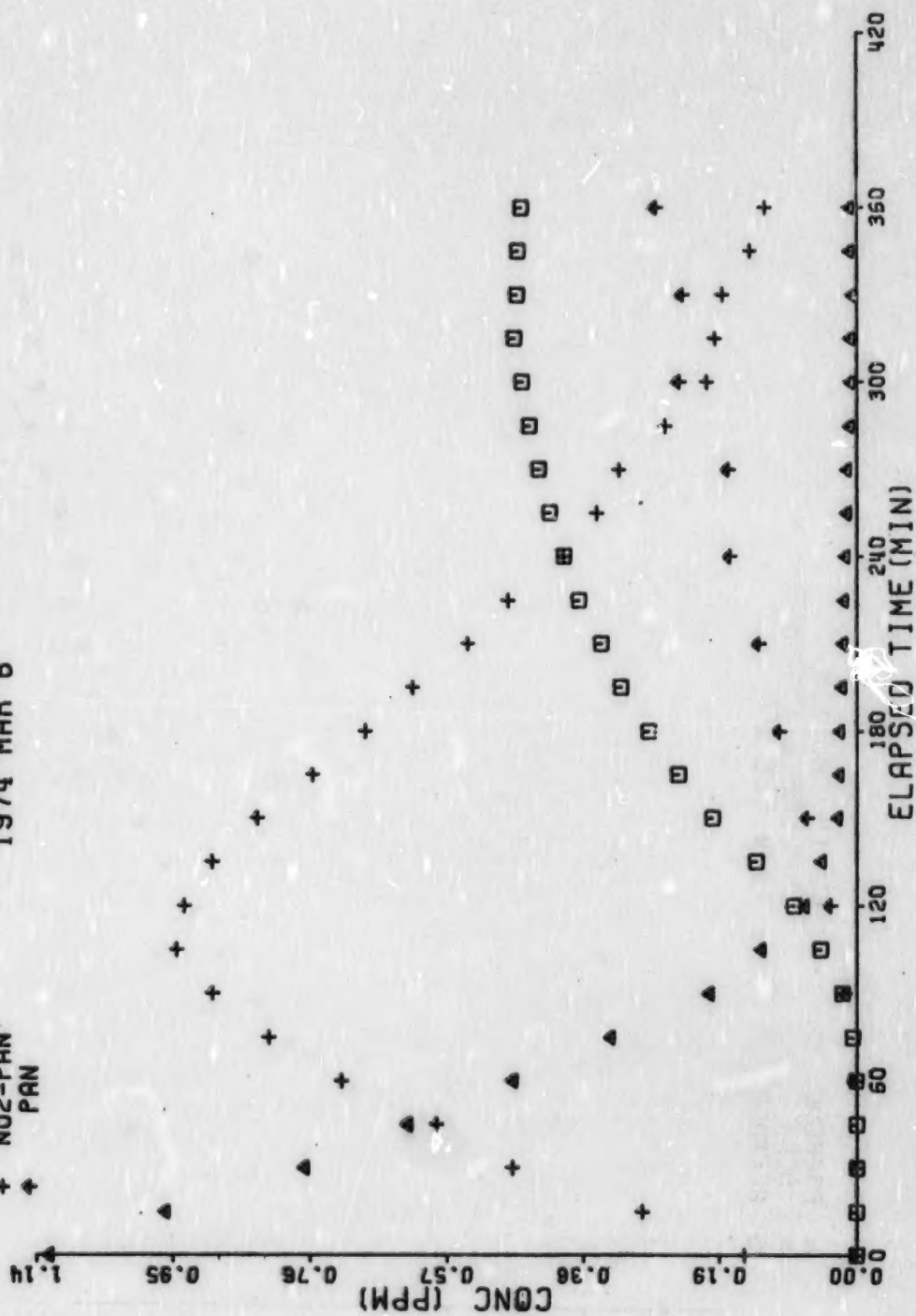
EC-14 PROPENE
EVACUABLE CHAMBER
1974 FEB 27

PROPENE
X
HCHO
X
ACETALD
O



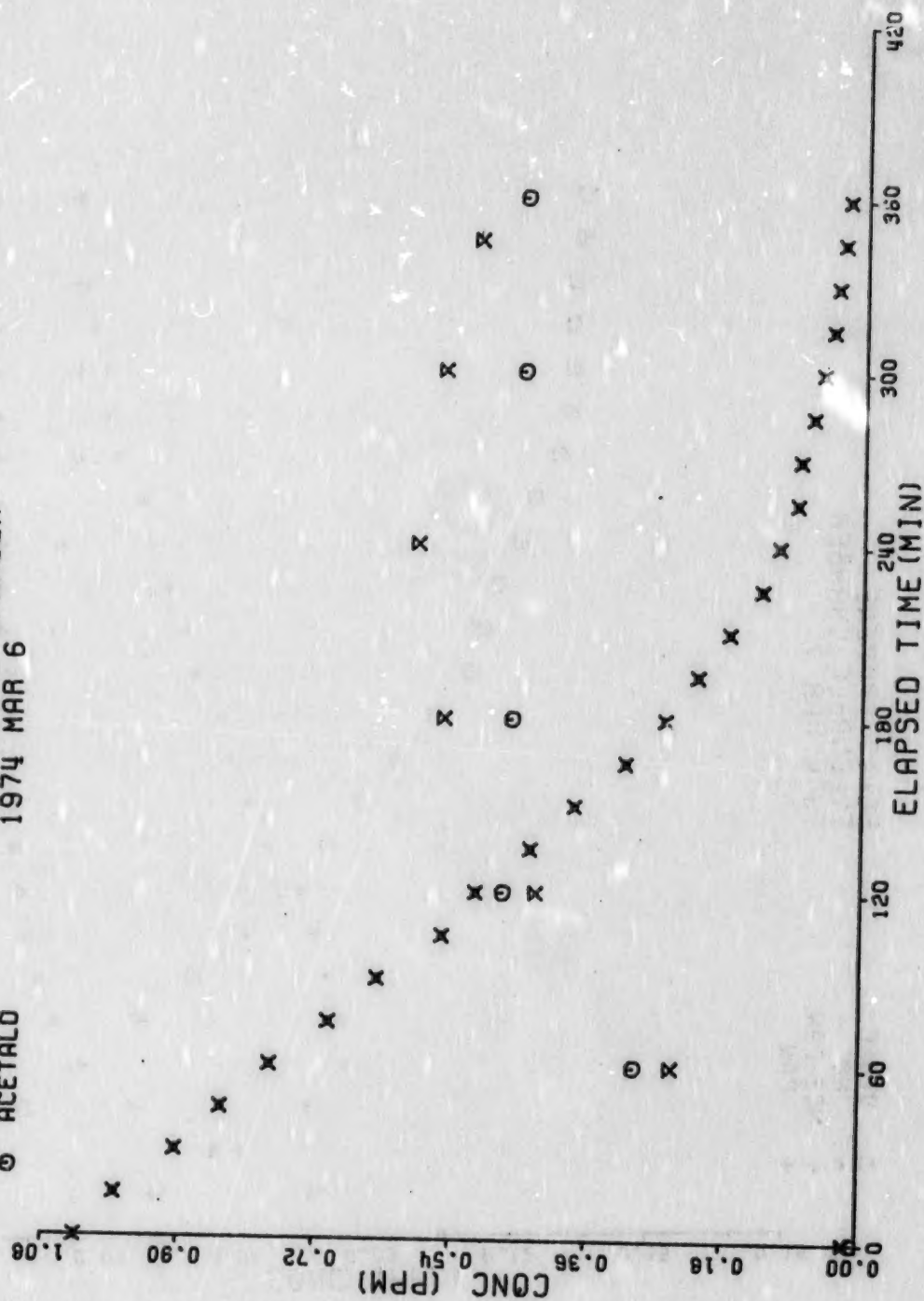
EC-16 PROPENE
EVACUABLE CHAMBER
1974 MAR 6

OZONE
NO
NO2-PAN
PAN



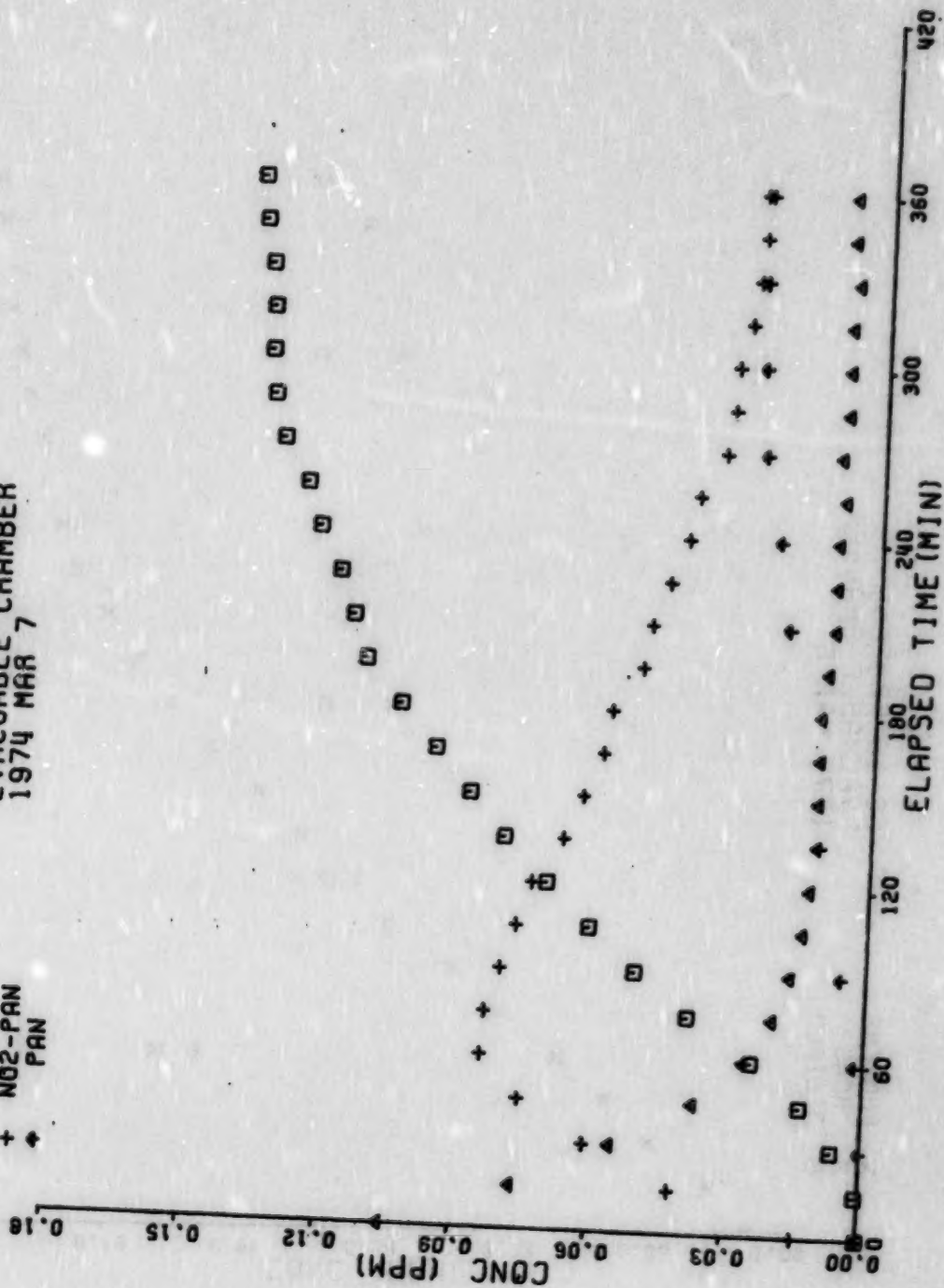
X PROPENE
 X HCHO
 O ACETALD

EC-16 PROPENE
 EVACUABLE CHAMBER
 1974 MAR 6



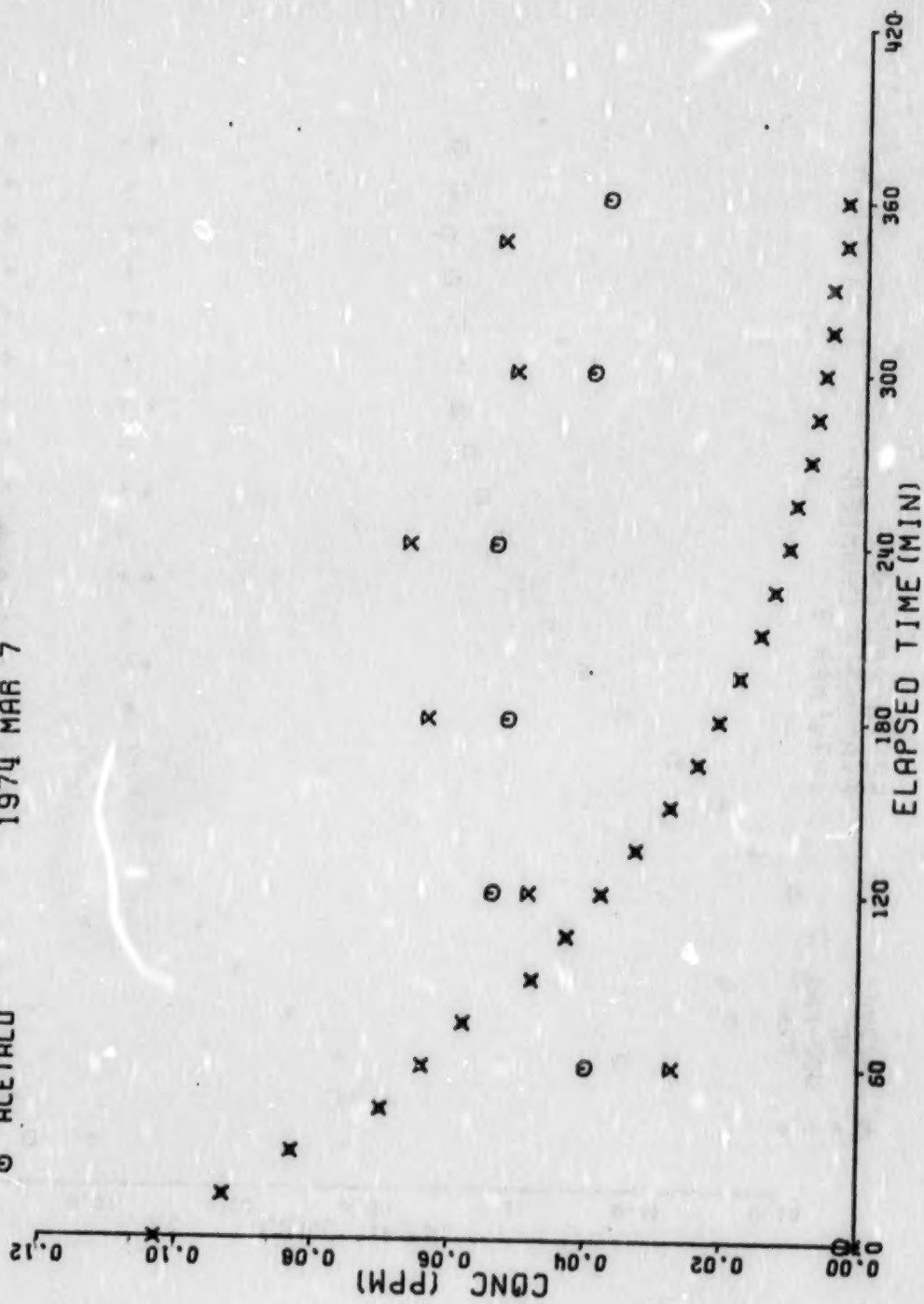
EC-17 PROPENE
EVACUABLE CHAMBER
1974 MAR 7

OZONE
 NO
 NO2-PAN
 PAN



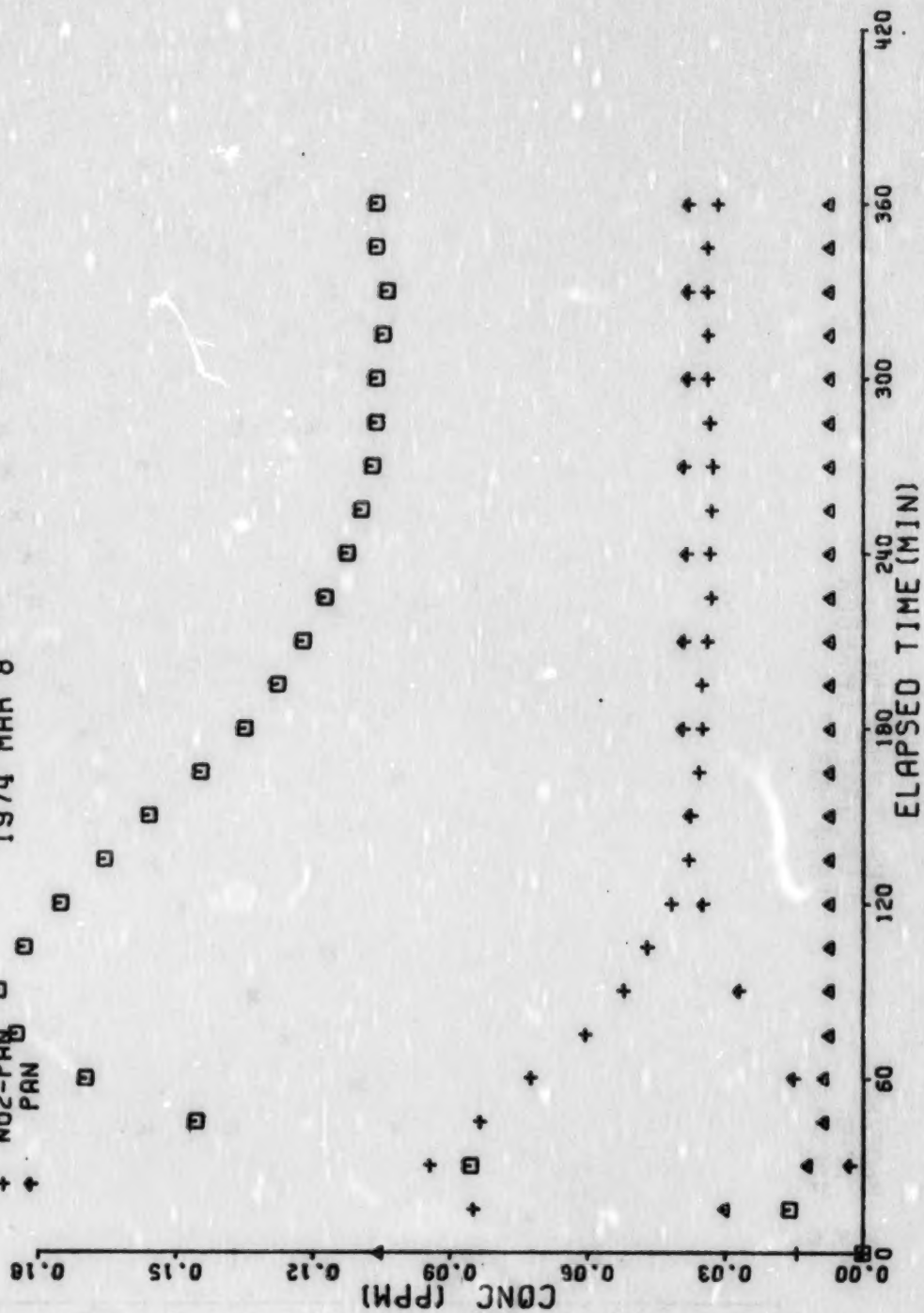
x PROPENE
 x HCHO
 o ACETALD

EC-17 PROPENE
 EVACUABLE CHAMBER
 1974 MAR 7



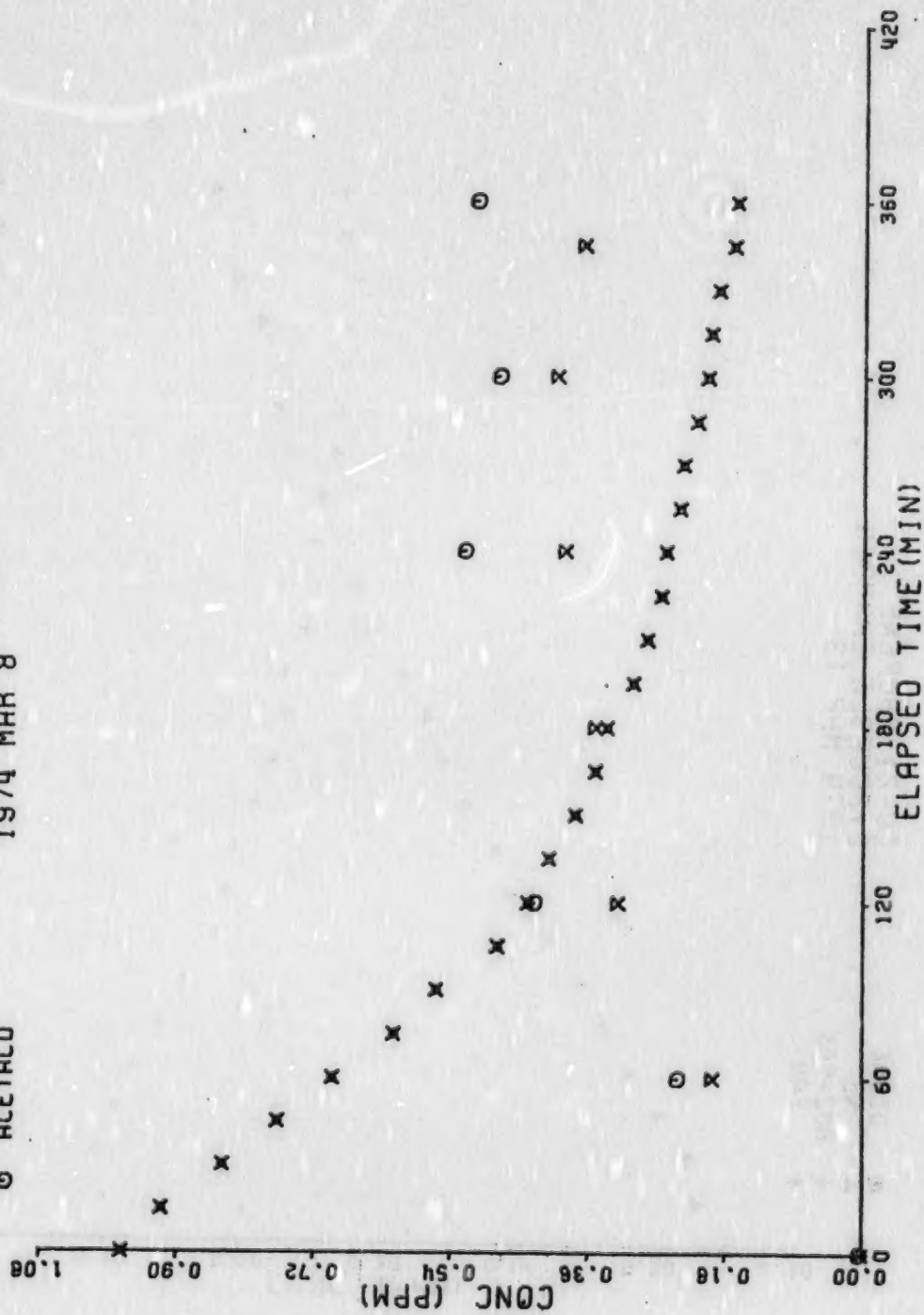
EC-18 PROPENE
EVACUABLE CHAMBER
1974 MAR 8

OZONE
NO
NO2-PAN
PAN



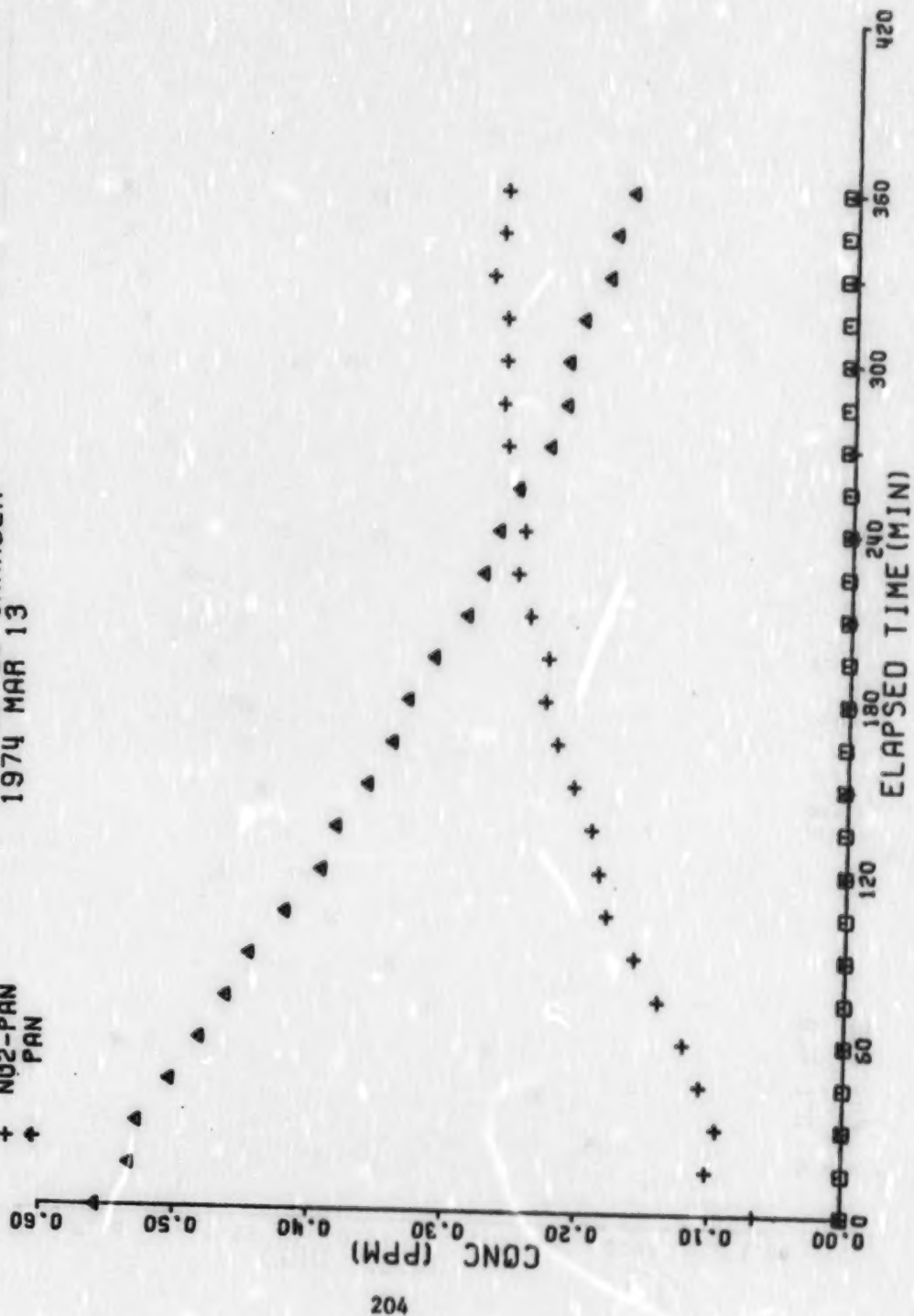
EC-18 PROPENE
EVACUABLE CHAMBER
1974 MAR 8

PROPENE
HCHO
ACETALD



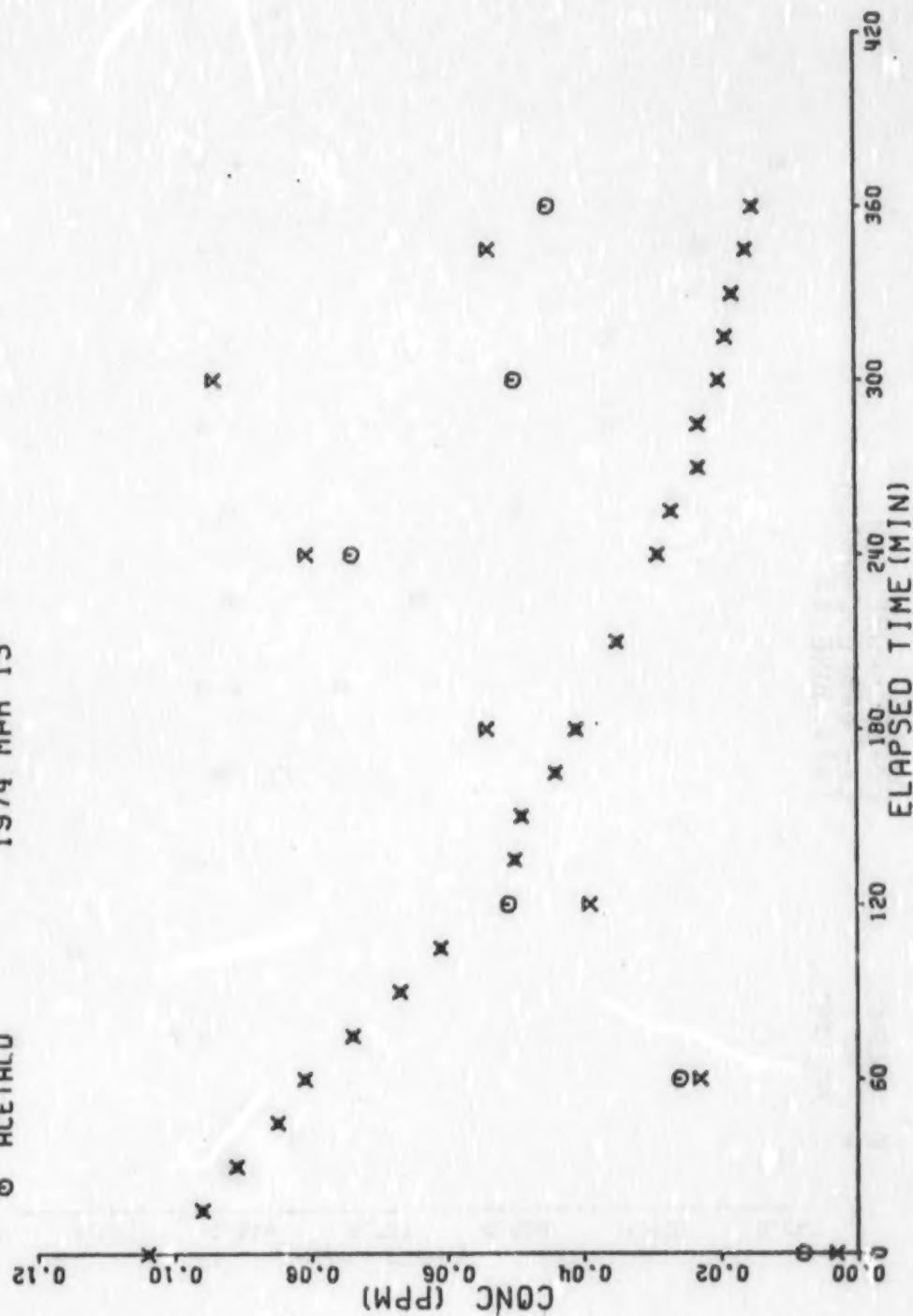
EC-21 PROPENE
EVACUABLE CHAMBER
1974 MAR 13

OZONE
 NO
 NO2-PAN
 PAN



EC-21 PROPENE
EVACUABLE CHAMBER
1974 MAR 13

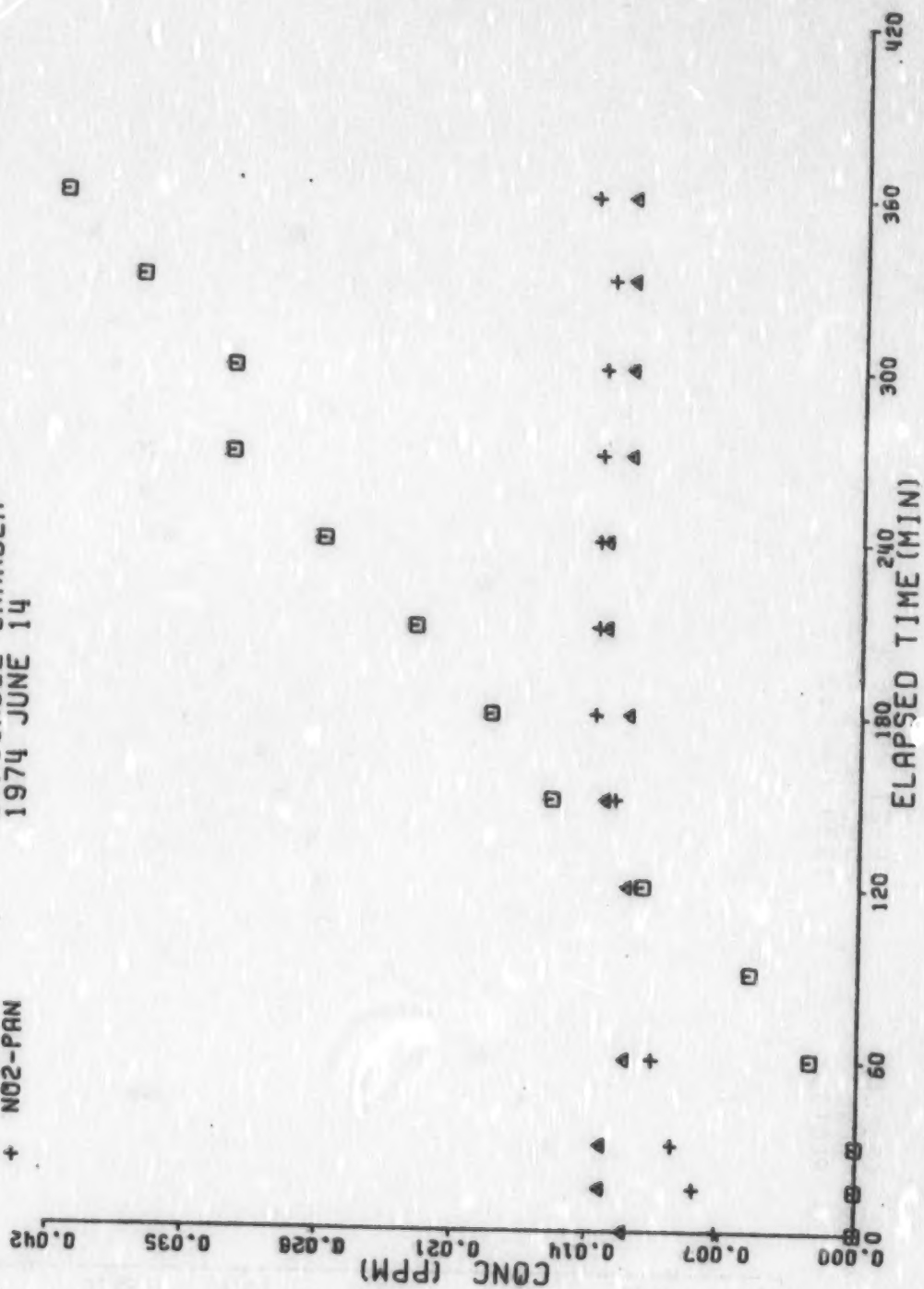
PROPENE
HCHO
ACETALD



EC-38 PURE AIR
EVACUABLE CHAMBER
1974 JUNE 14

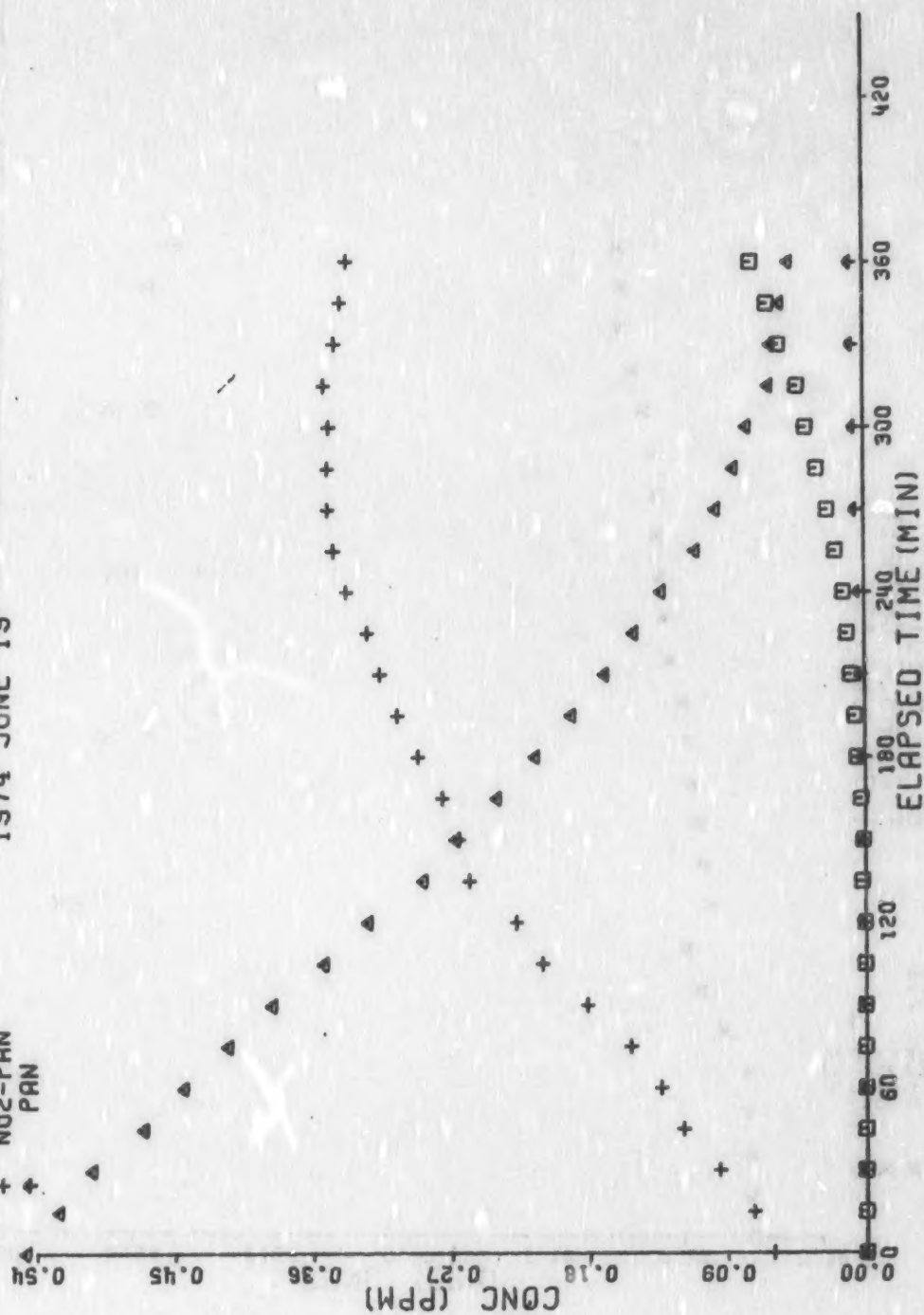
OZONE
NO
NO2-PAN

□ ▲ +



EC-39 N-BUTANE
EVACUABLE CHAMBER
1974 JUNE 19

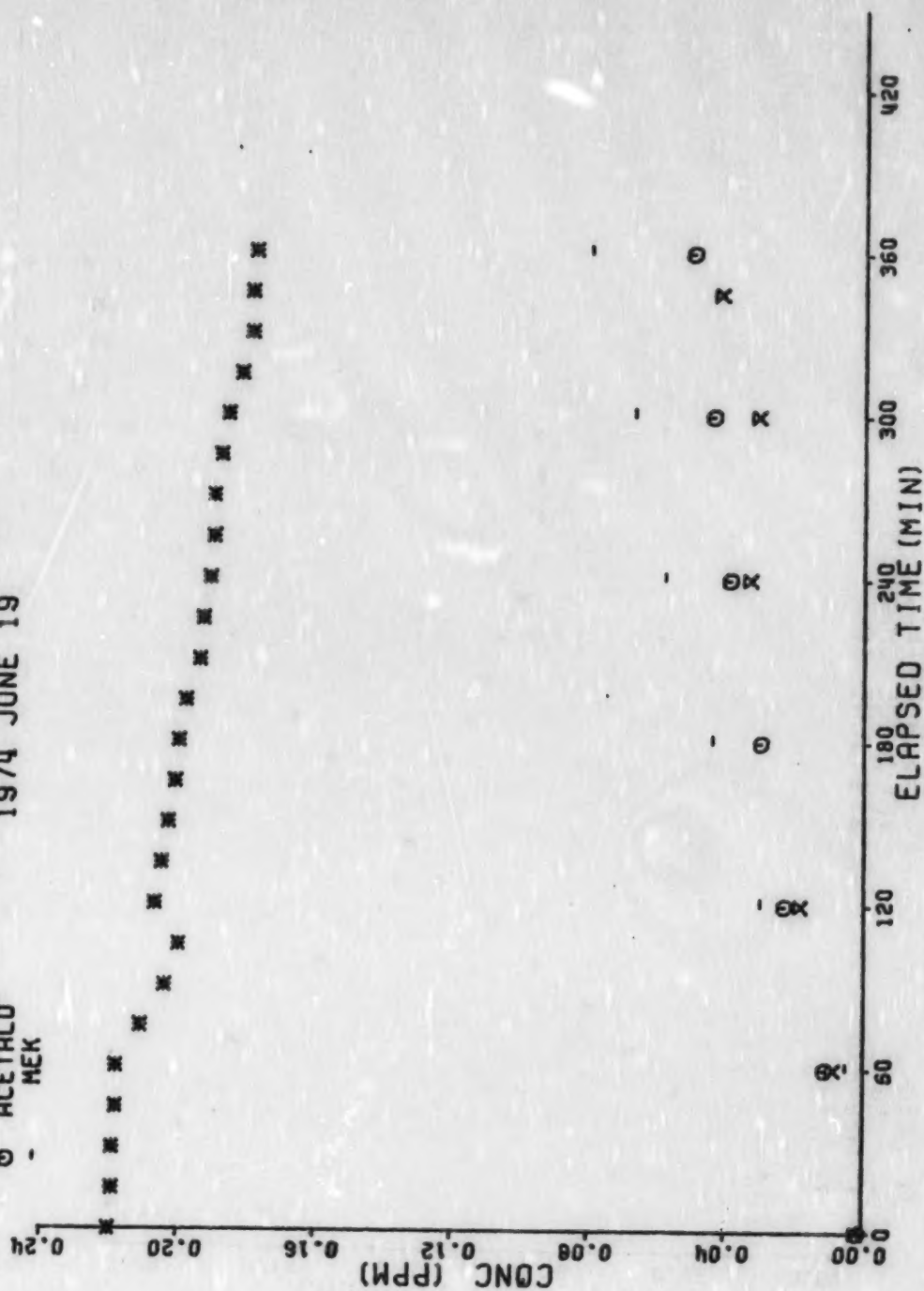
OZONE
NO
NO2-PAN
PAN



EC-39 N-BUTANE
EVACUABLE CHAMBER
1974 JUNE 19

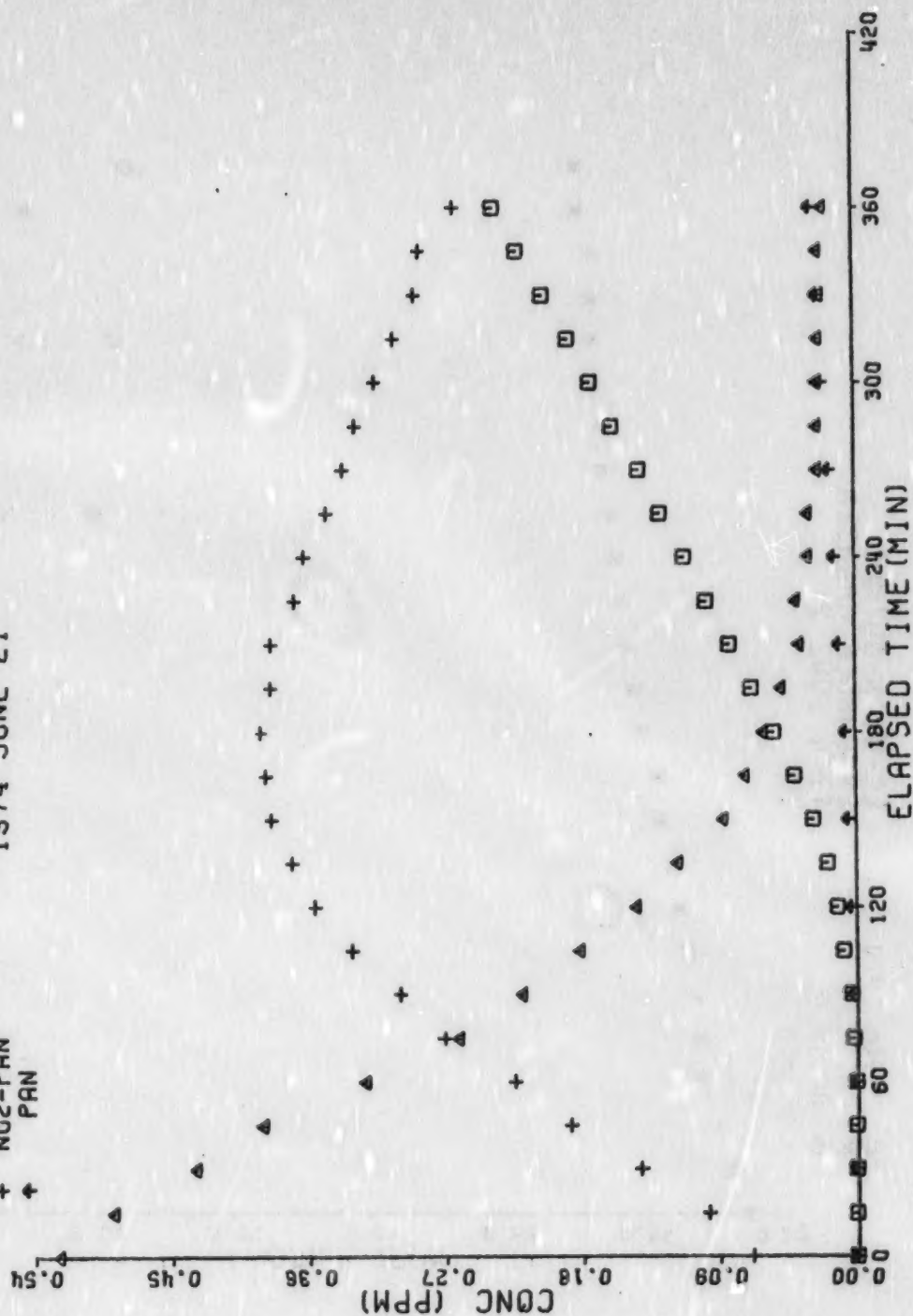
N-C4 /10
HCHO
ACETALD
HEK

■ x ○ -



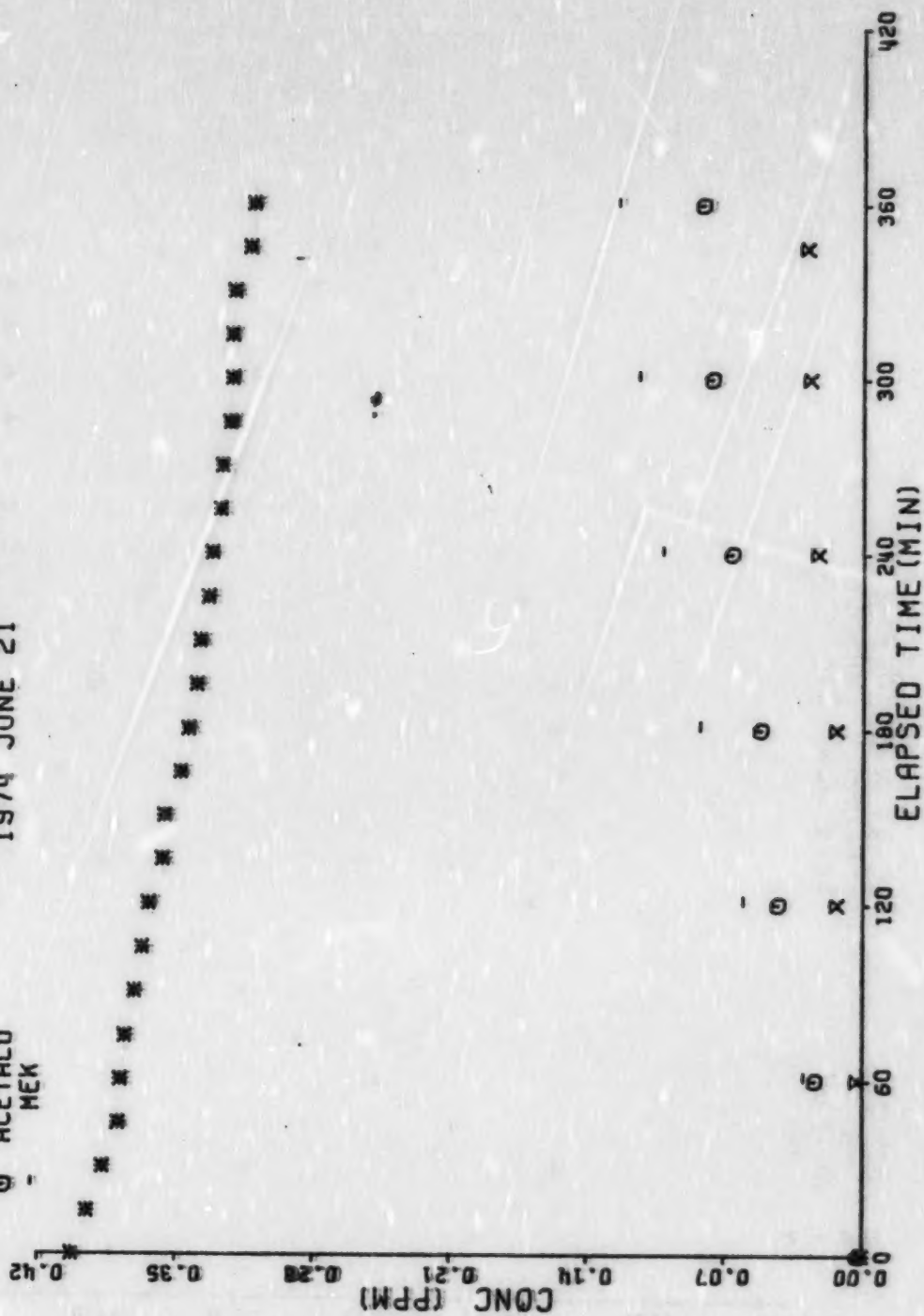
EC-41 N-BUTANE
EVACUABLE CHAMBER
1974 JUNE 21

OZONE
NO
NO2-PAN
PAN



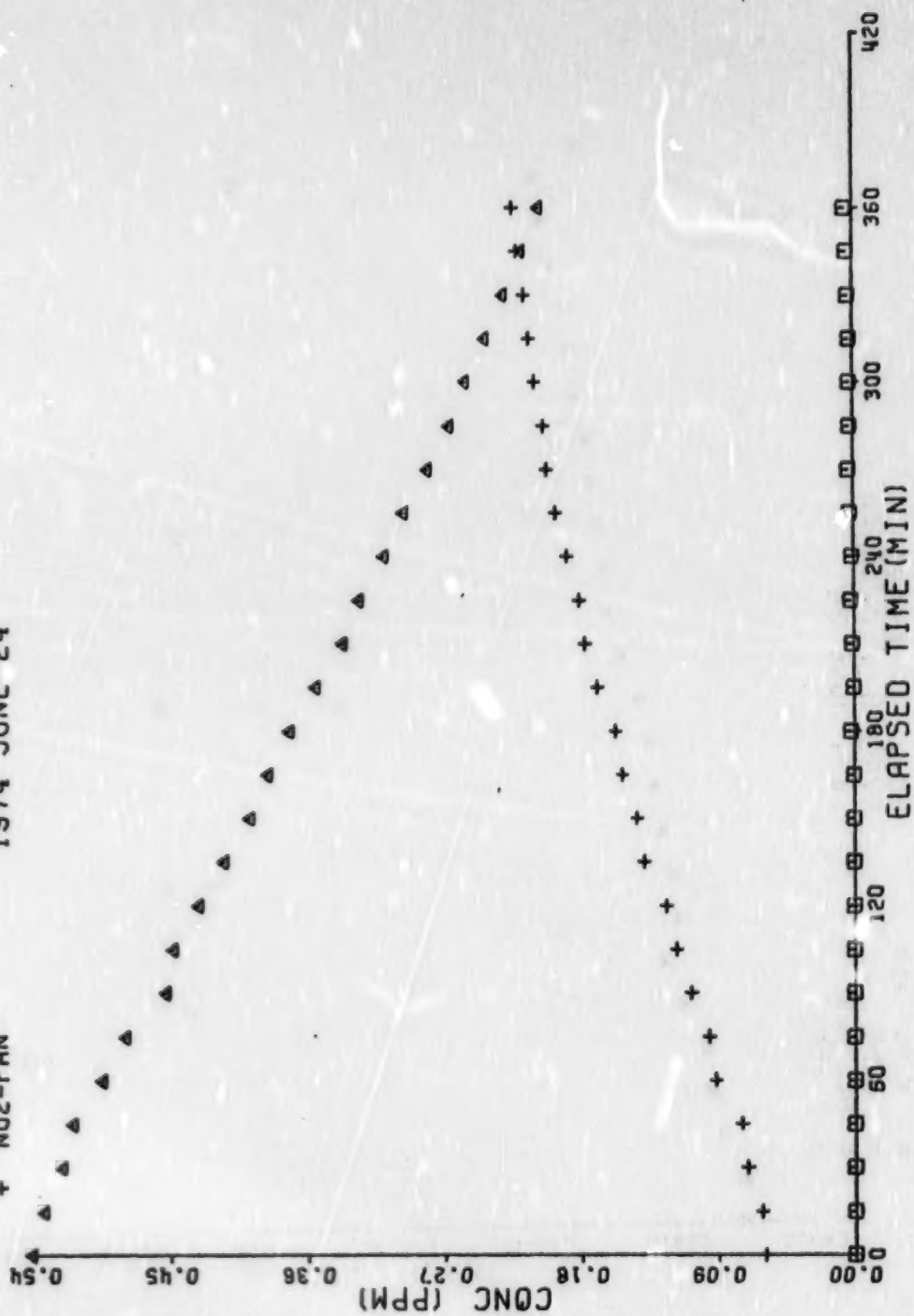
EC-41 N-BUTANE
EVACUABLE CHAMBER
1974 JUNE 21

N-C4 /10
HCHO
ACETALD
MEK



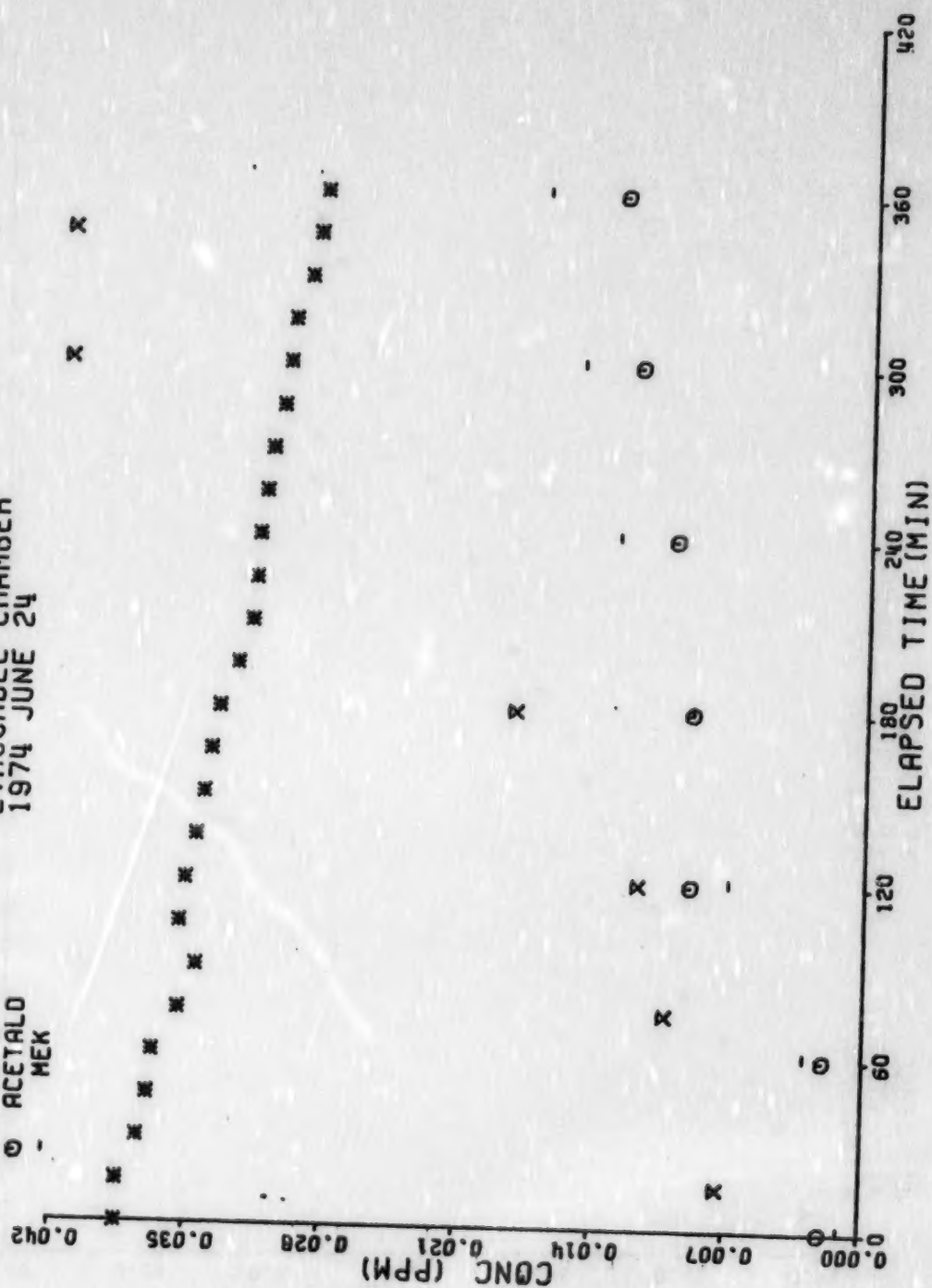
EC-42 N-BUTANE
EVACUABLE CHAMBER
1974 JUNE 24

□ OZONE
△ NO
+ NO2-PAN



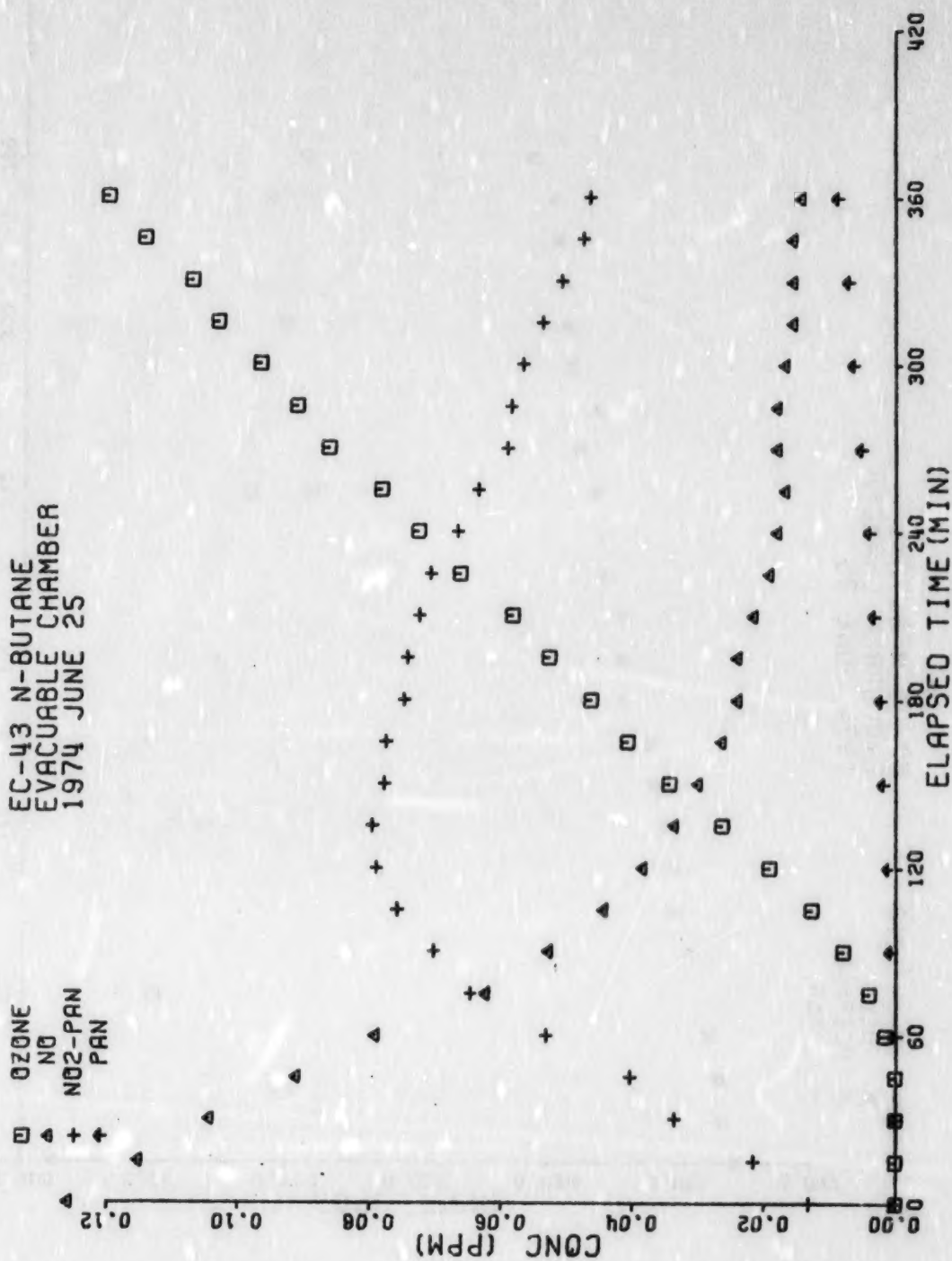
EC-42 N-BUTANE
EVACUABLE CHAMBER
1974 JUNE 24

N-C4 /10
HCHO
ACETALD
MEK



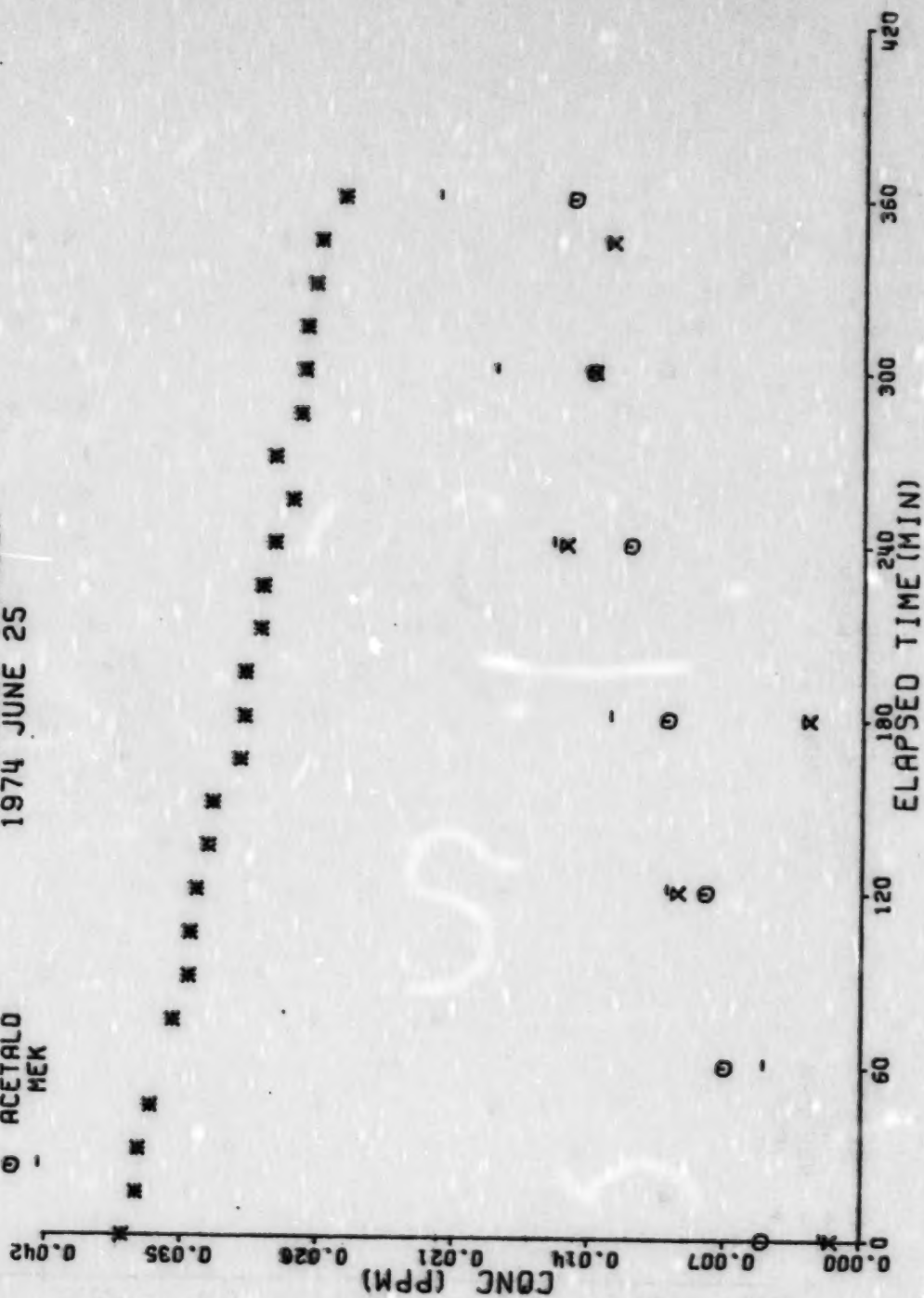
EC-43 N-BUTANE
EVACUABLE CHAMBER
1974 JUNE 25

OZONE
NO
NO2-PAN
PAN



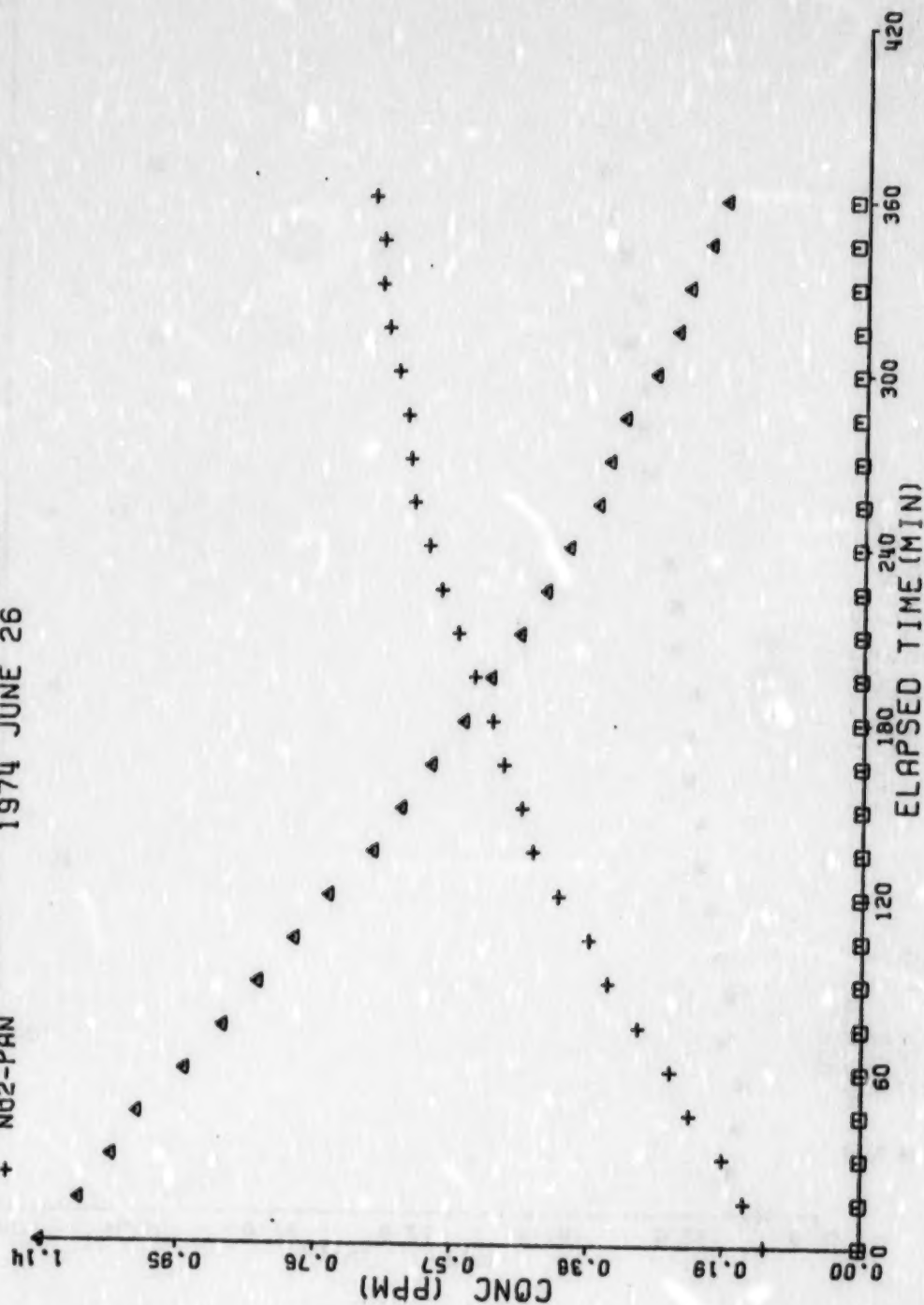
EC-43 N-BUTANE
EVACUABLE CHAMBER
1974 JUNE 25

N-C4 /10
HCHO
ACETALD
MEK



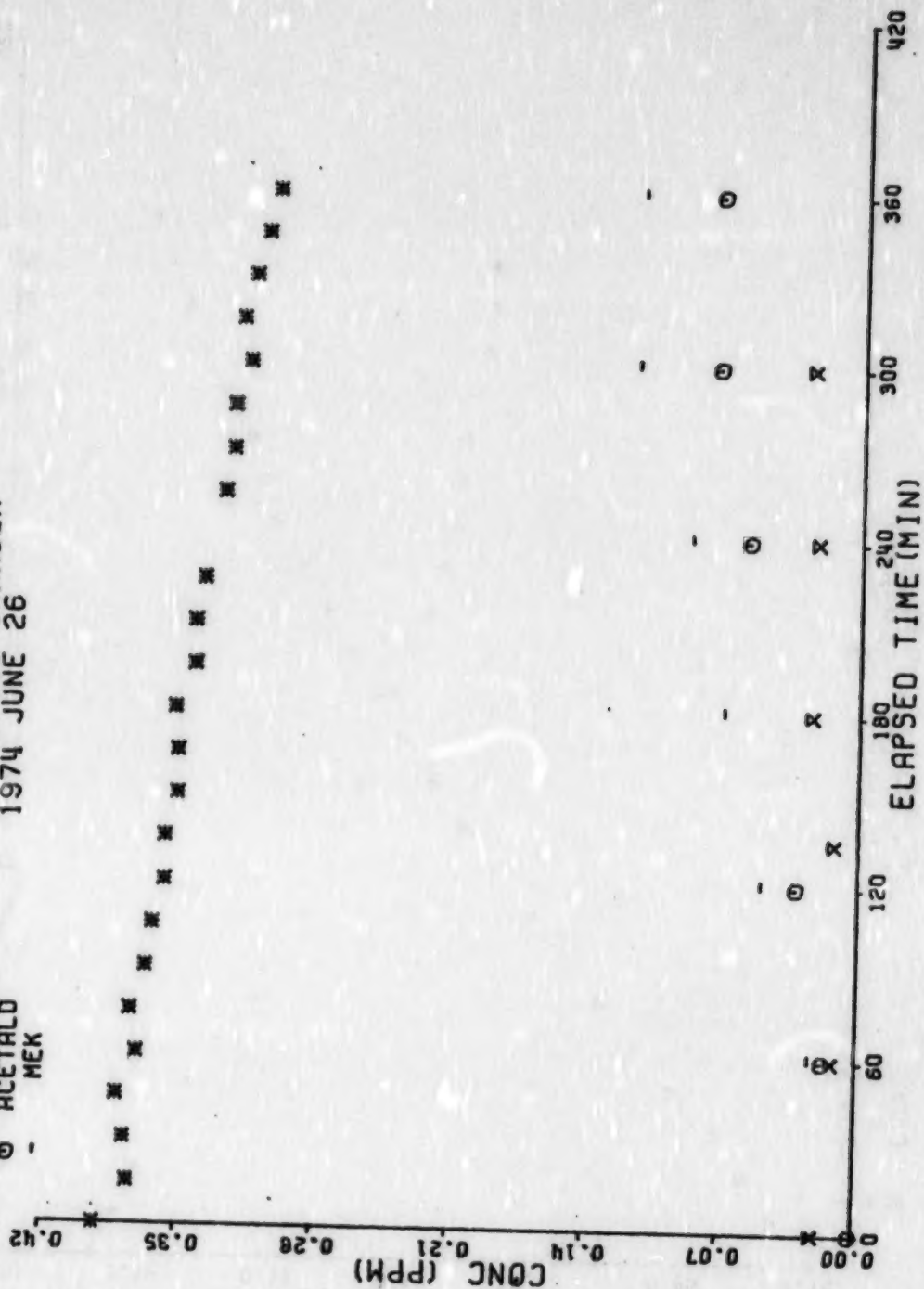
EC-44 N-BUTANE
EVACUABLE CHAMBER
1974 JUNE 26

□ OZONE
△ NO
+ NO2-PAN



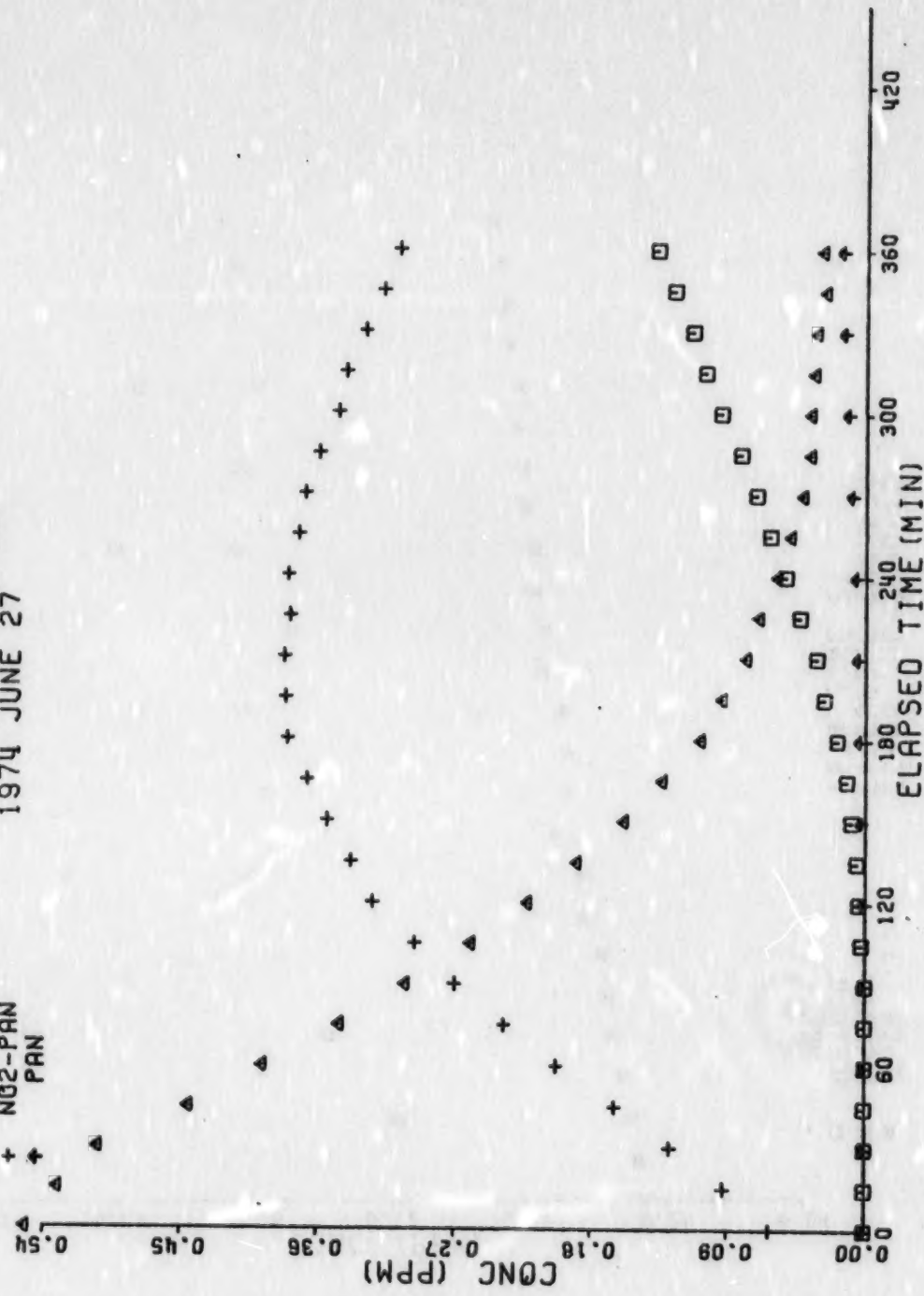
N-C4 /10
HCHO
ACETALD
MEK

EC-44 N-BUTANE
EVACUABLE CHAMBER
1974 JUNE 26



OZONE
 NO
 NO2-PAN
 PAN

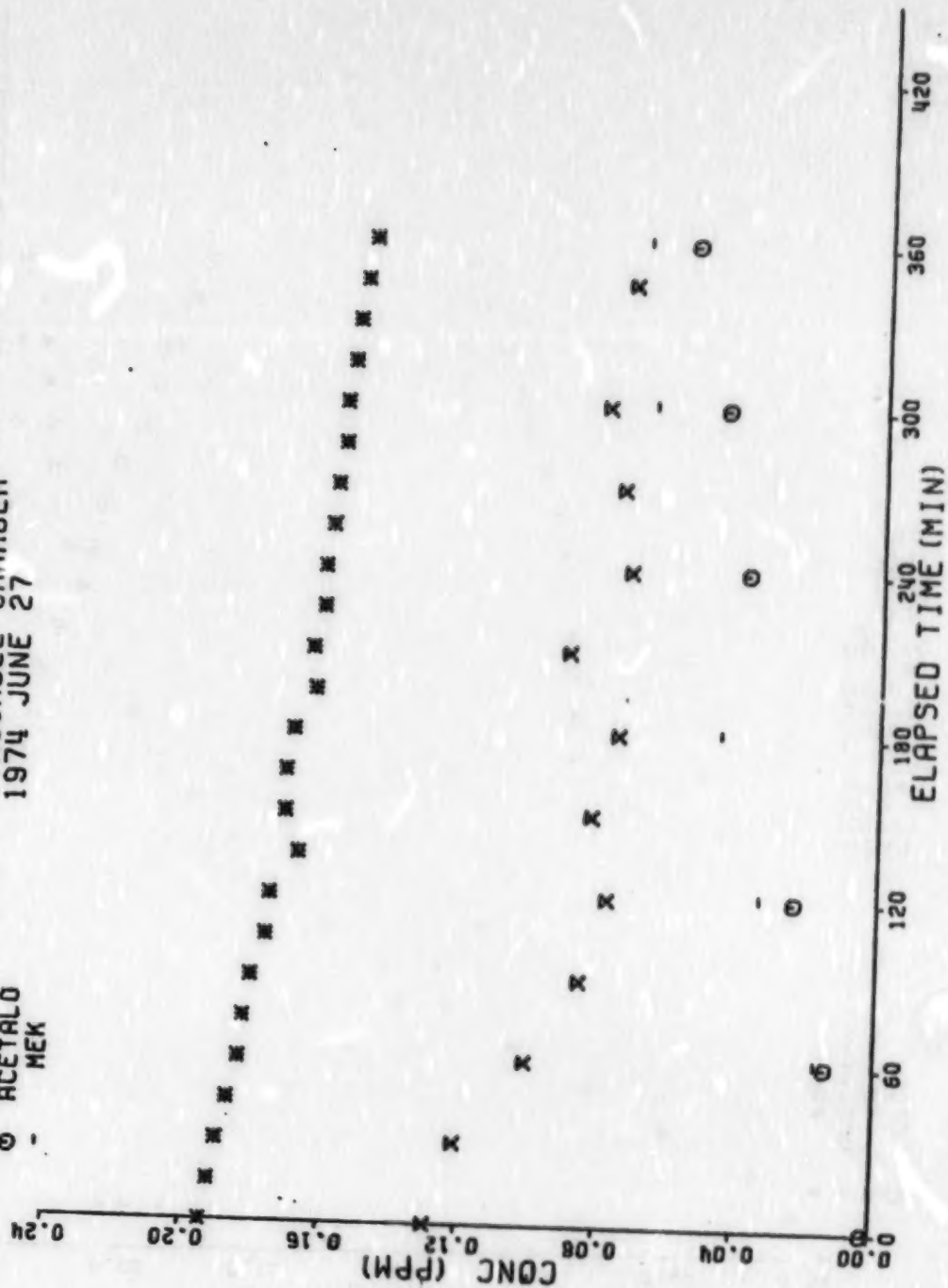
EC-45 HCHO ADDED
 EVACUABLE CHAMBER
 1974 JUNE 27



EC-45 HCHO ADDED
EVACUABLE CHAMBER
1974 JUNE 27

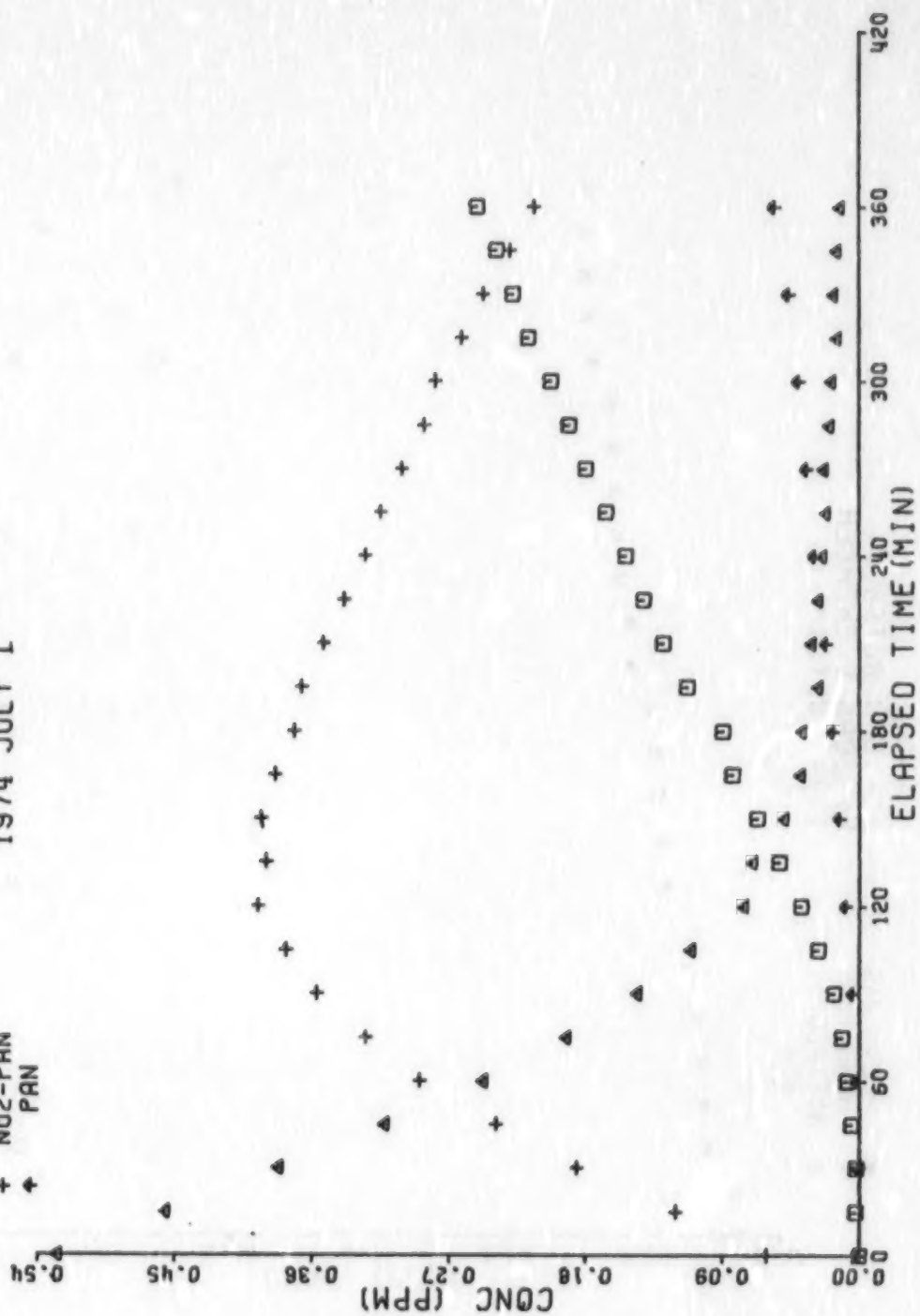
N-C4 /10
HCHO
ACETALD
MEK

✕ ✕ ○



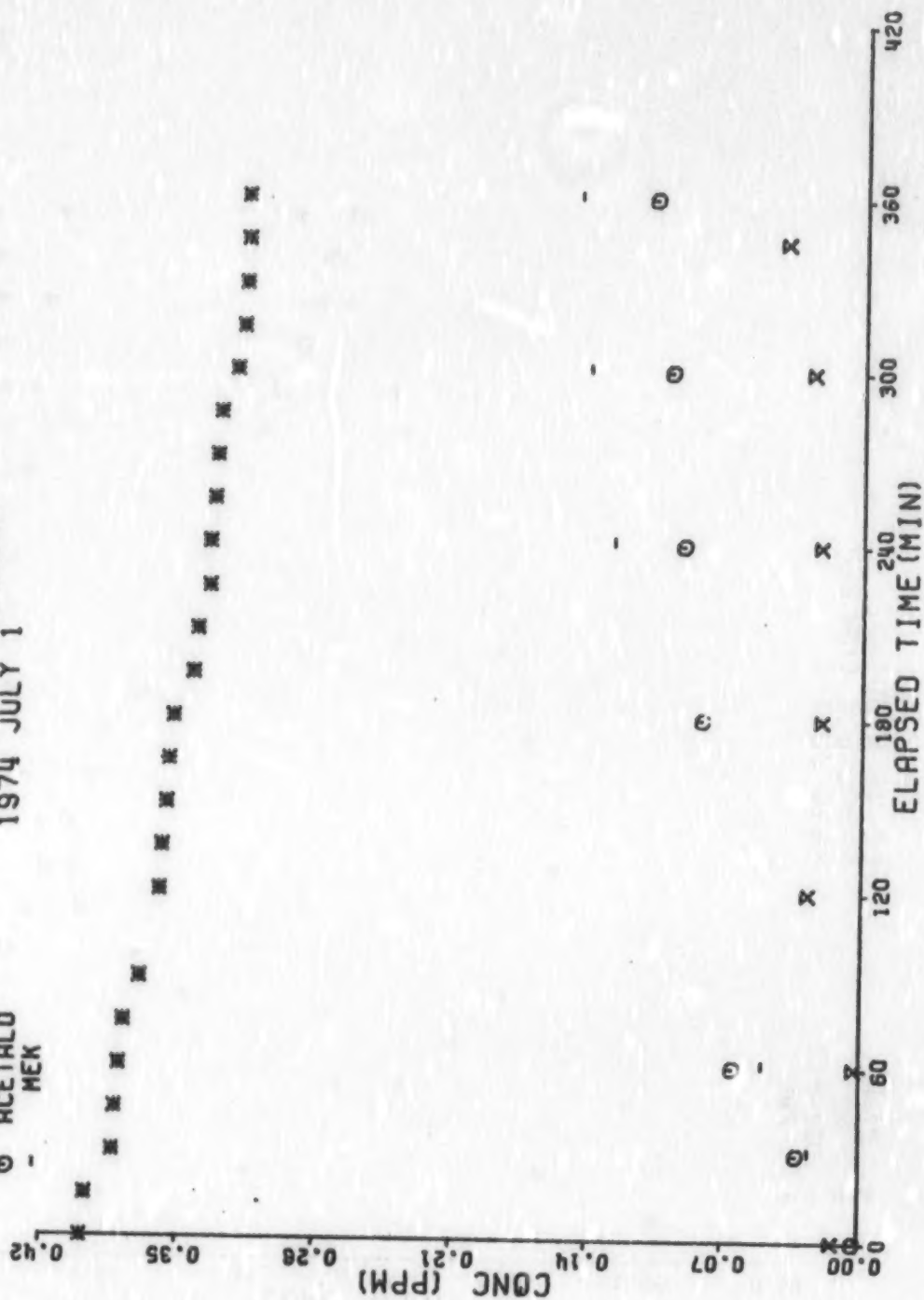
EC-46 N-BUTANE
EVACUABLE CHAMBER
1974 JULY 1

OZONE
NO
NO2-PAN
PAN



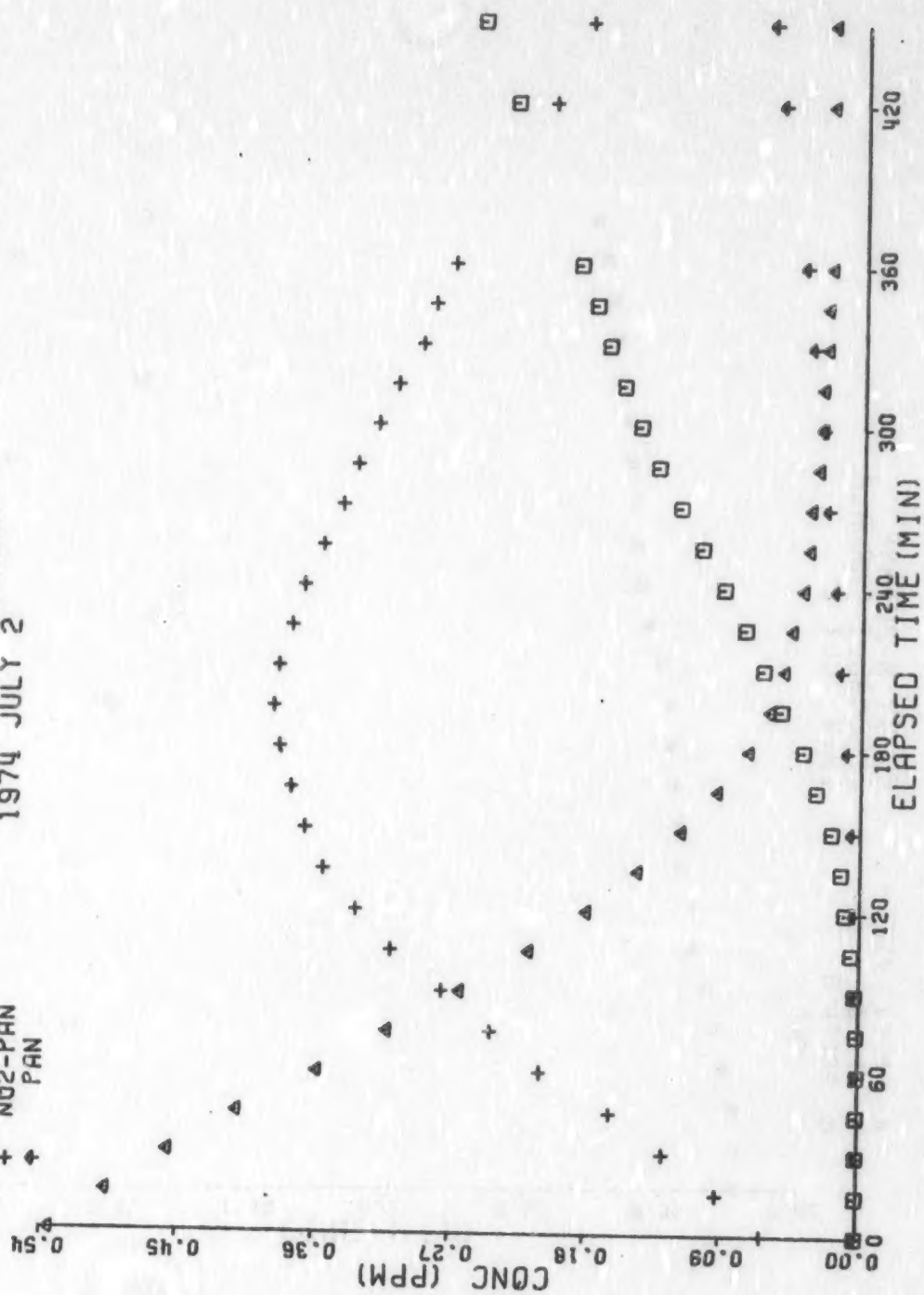
EC-46 N-BUTANE
EVACUABLE CHAMBER
1974 JULY 1

N-C4 /10
HCHO
ACETALD
MEK



EC-47 N-BUTANE
EVACUABLE CHAMBER
1974 JULY 2

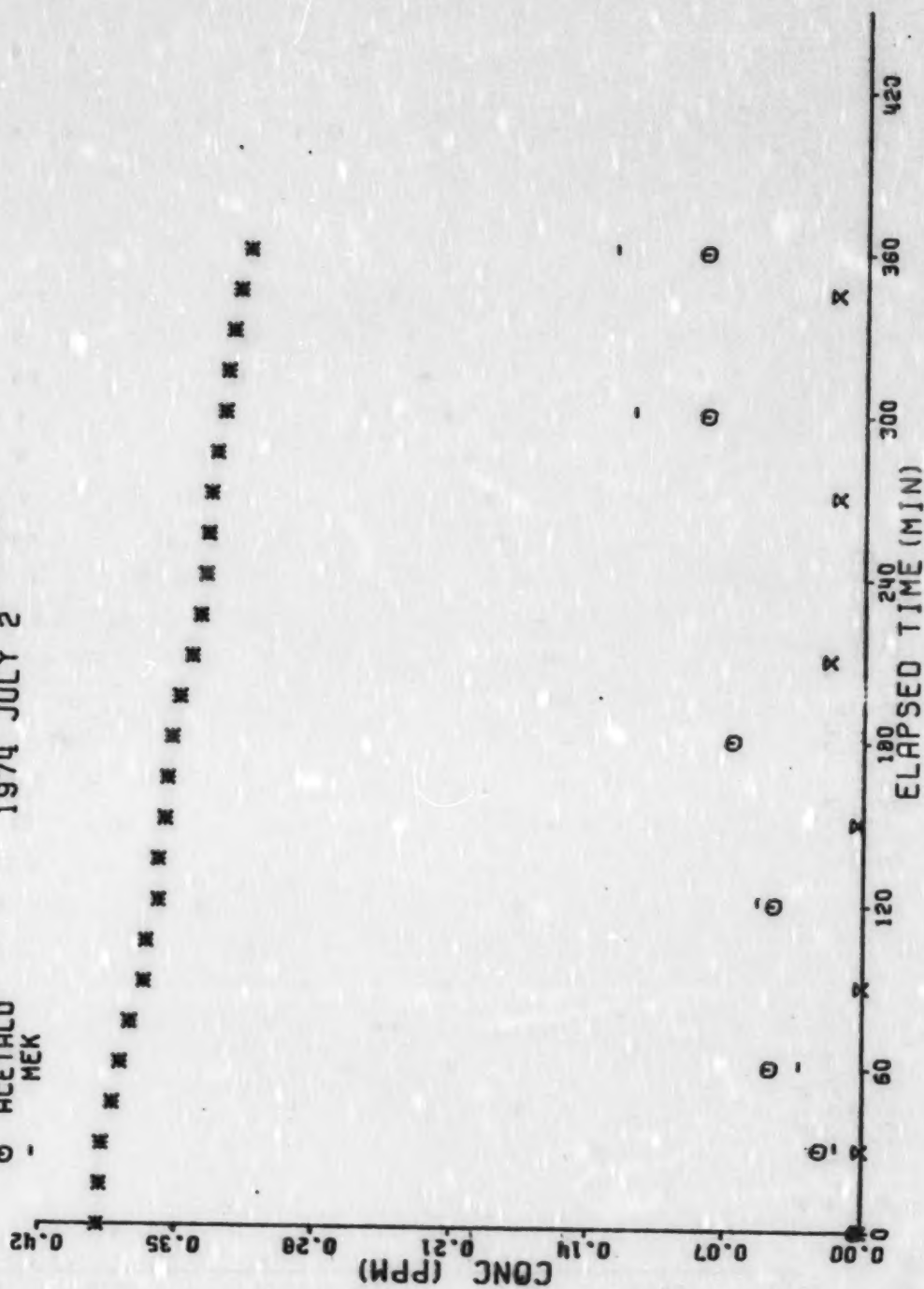
OZONE
NO
NO2-PAN
PAN



EC-47 N-BUTANE
EVACUABLE CHAMBER
1974 JULY 2

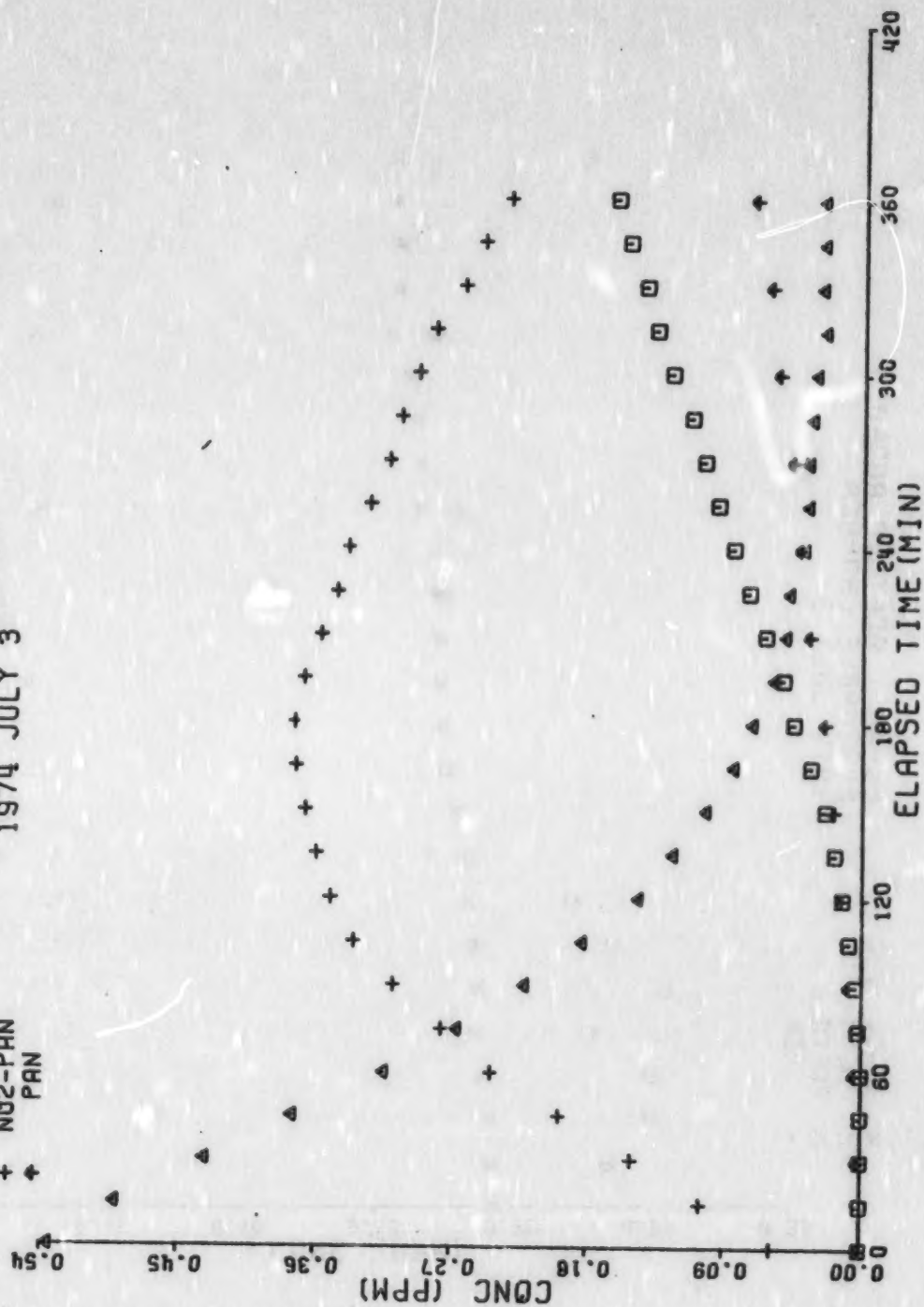
N-C4 /10
HCHO
ACETALD
MEK

✕ ✕ ○ -



EC-48 ACETALD ADDED
EVACUABLE CHAMBER
1974 JULY 3

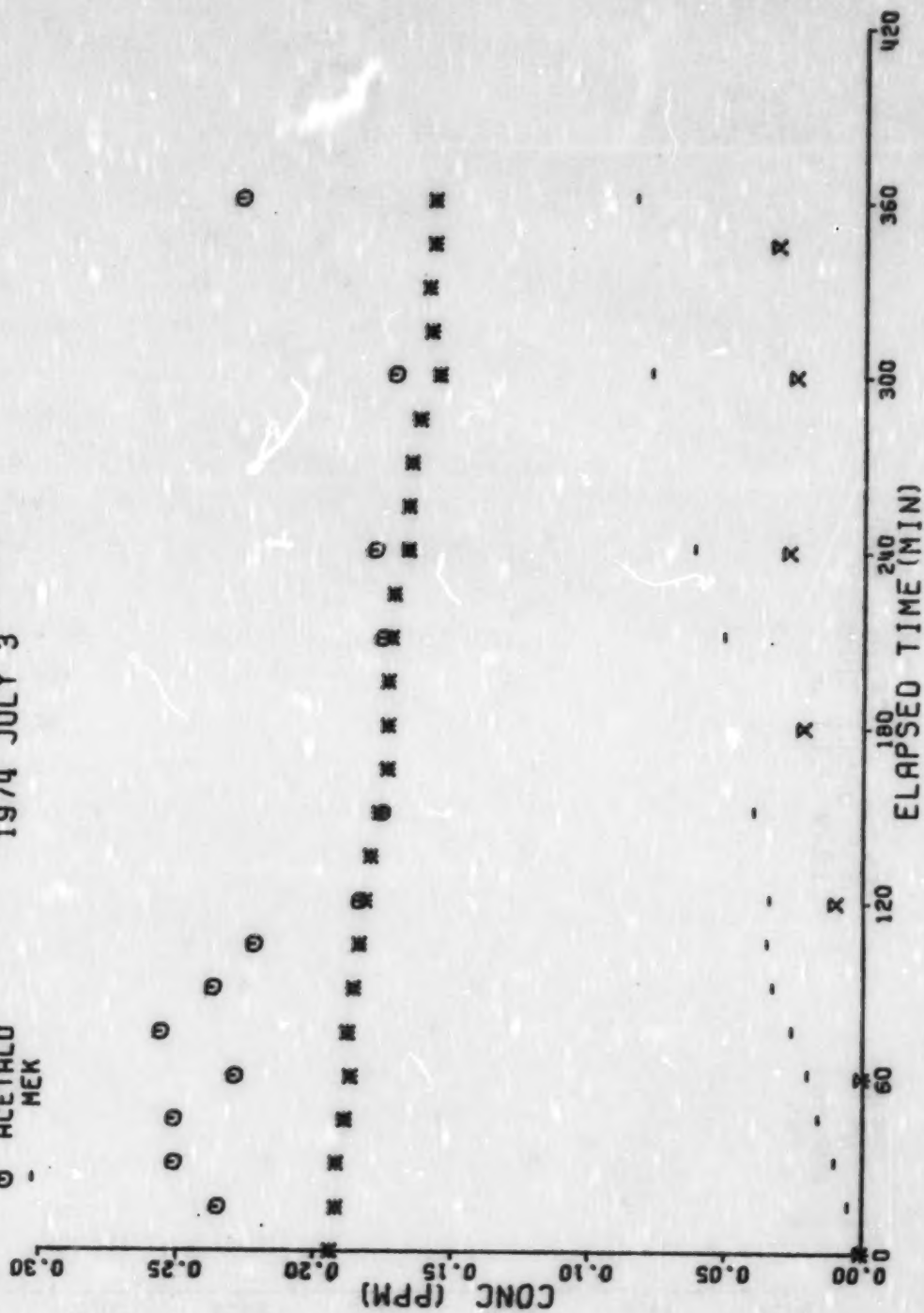
OZONE
NO
NO2-PAN
PAN



EC-48 ACETALD ADDED
EVACUABLE CHAMBER
1974 JULY 3

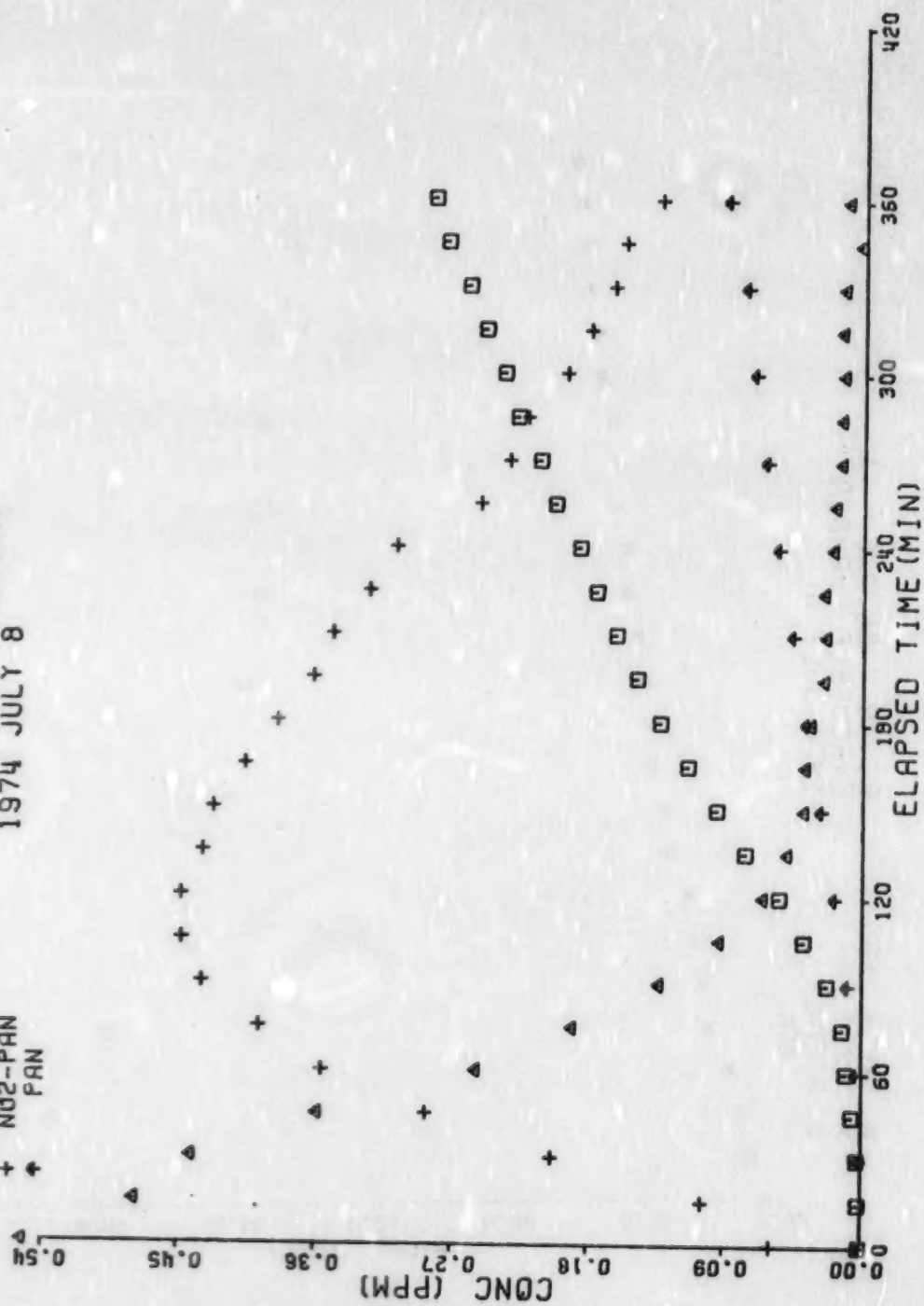
N-C4 /10
HCHO
ACETALD
HEX

* X O -



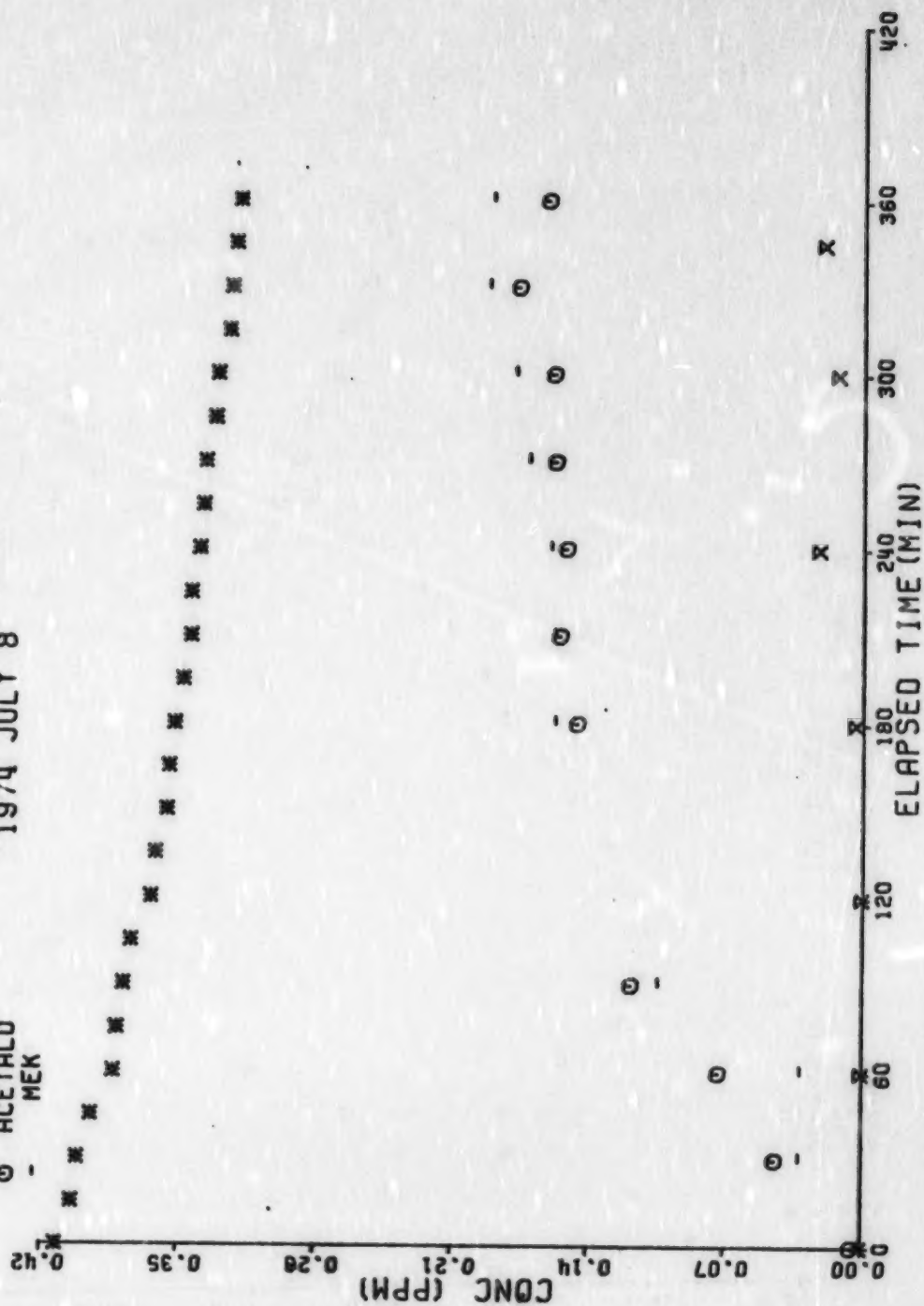
EC-49 N-BUTANE
EVACUABLE CHAMBER
1974 JULY 8

OZONE
NO
NO2-PAN
PAN



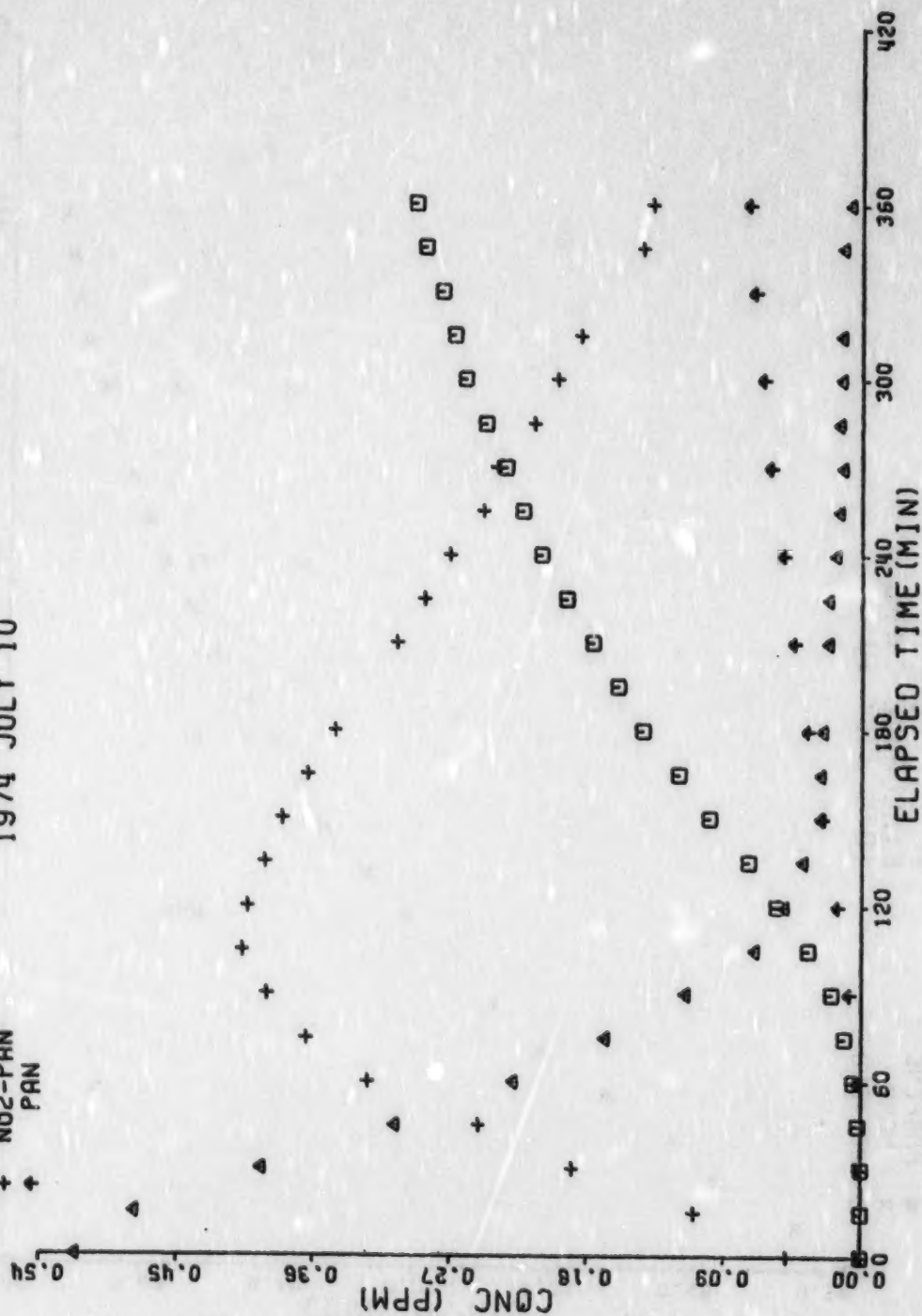
EC-49 N-BUTANE
EVACUABLE CHAMBER
1974 JULY 8

N-C4 /10
HCHO
ACETALD
MEK



EC-51 PROPENE
EVACUABLE CHAMBER
1974 JULY 10

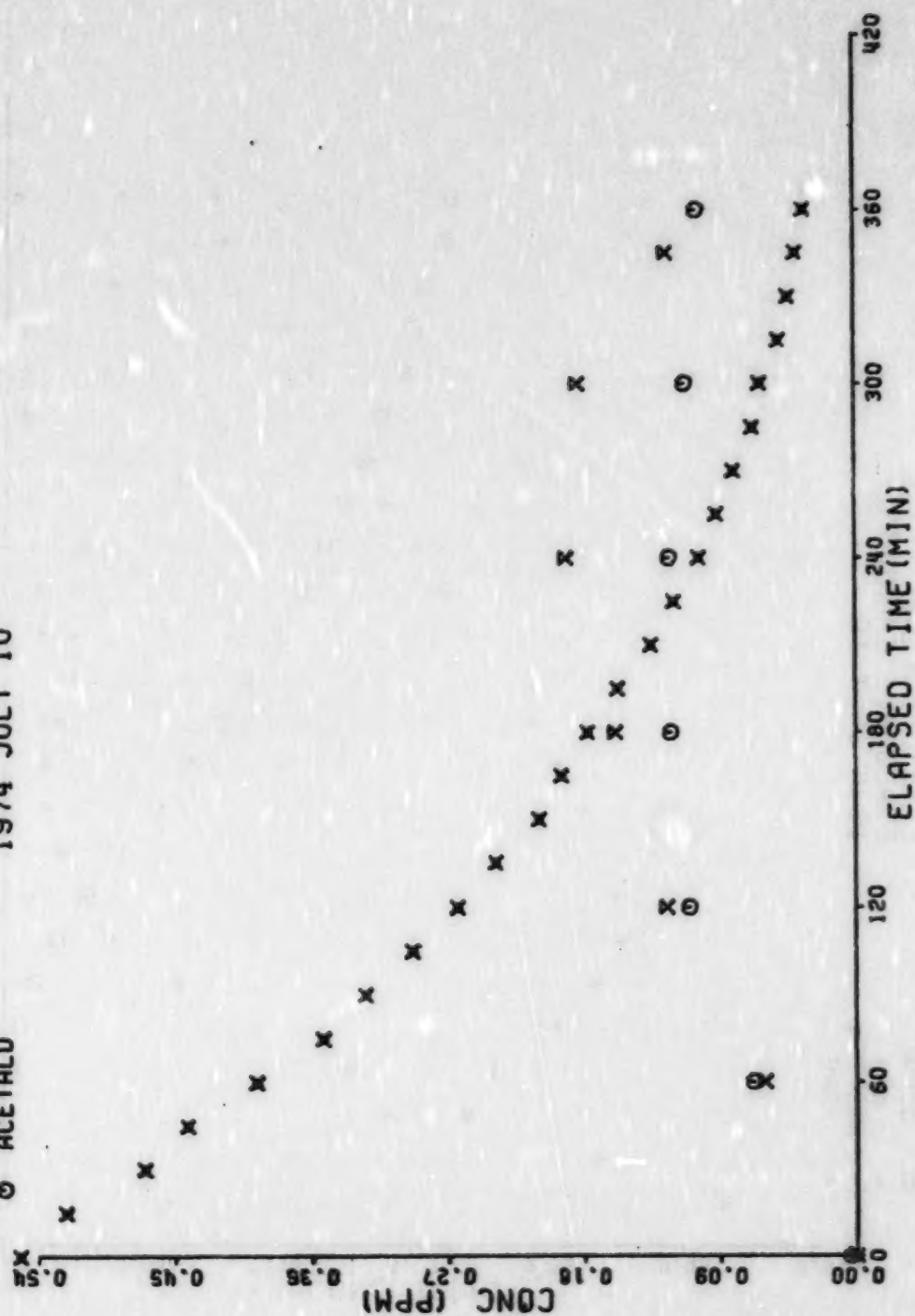
OZONE
 NO
 NO2-PAN
 PAN



EC-51 PROPENE
EVACUABLE CHAMBER
1974 JULY 10

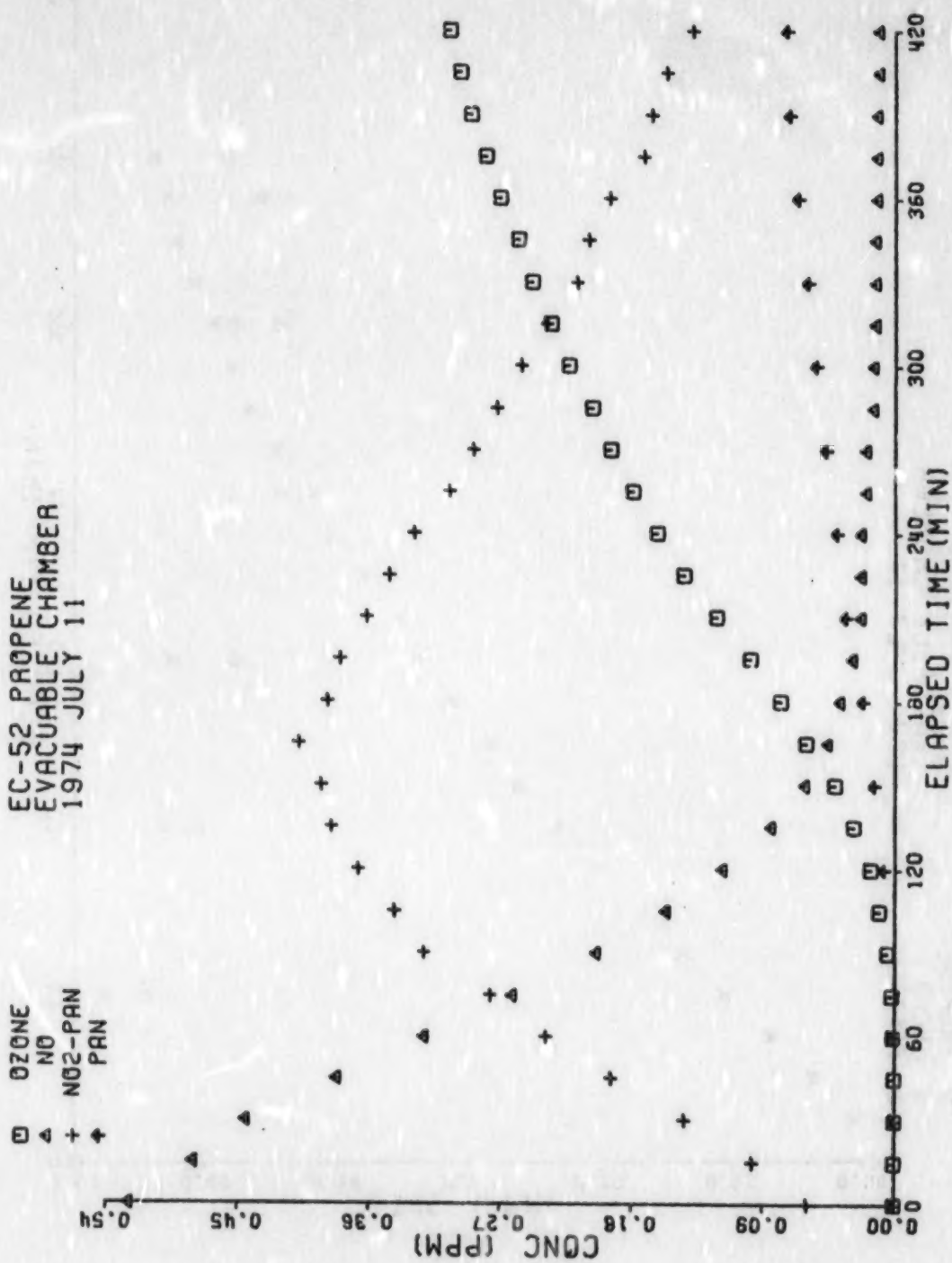
PROPENE
HCHO
ACETALD

X X O



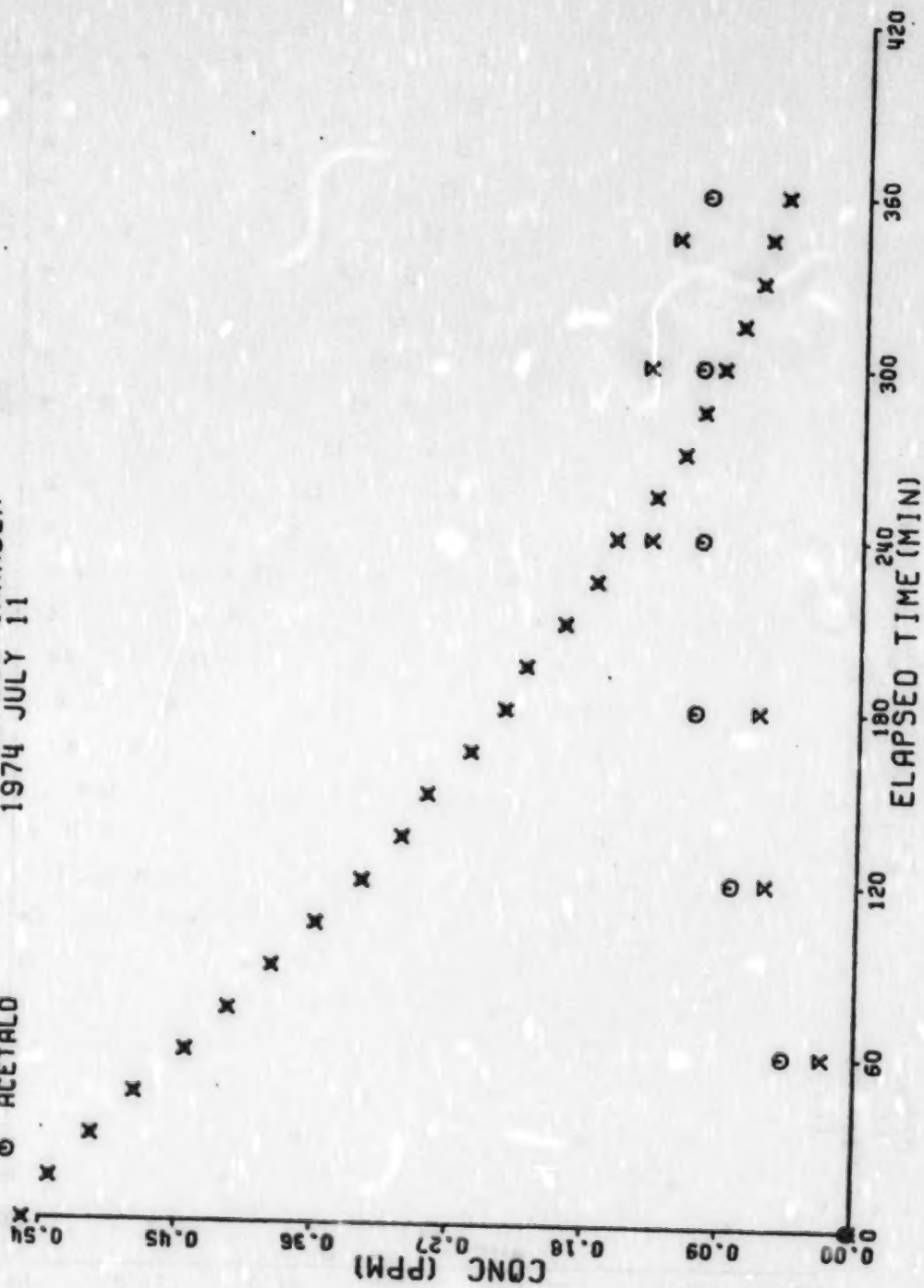
EC-52 PROPENE
EVACUABLE CHAMBER
1974 JULY 11

OZONE
NO
NO2-PAN
PAN



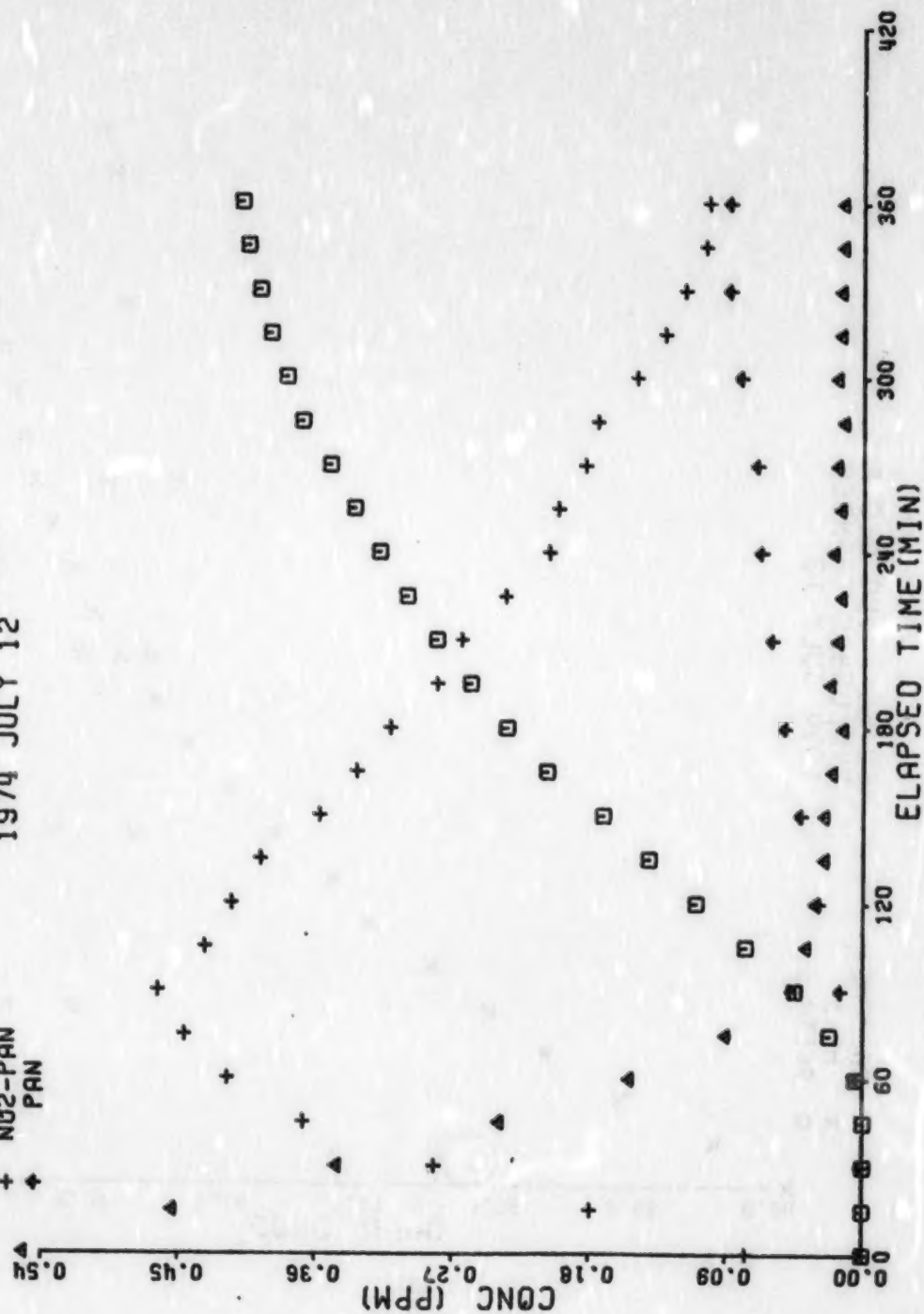
EC-52 PROPENE
EVACUABLE CHAMBER
1974 JULY 11

PROPENE
HCHO
ACETALD



EC-53 100 DEG F
EVACUABLE CHAMBER
1974 JULY 12

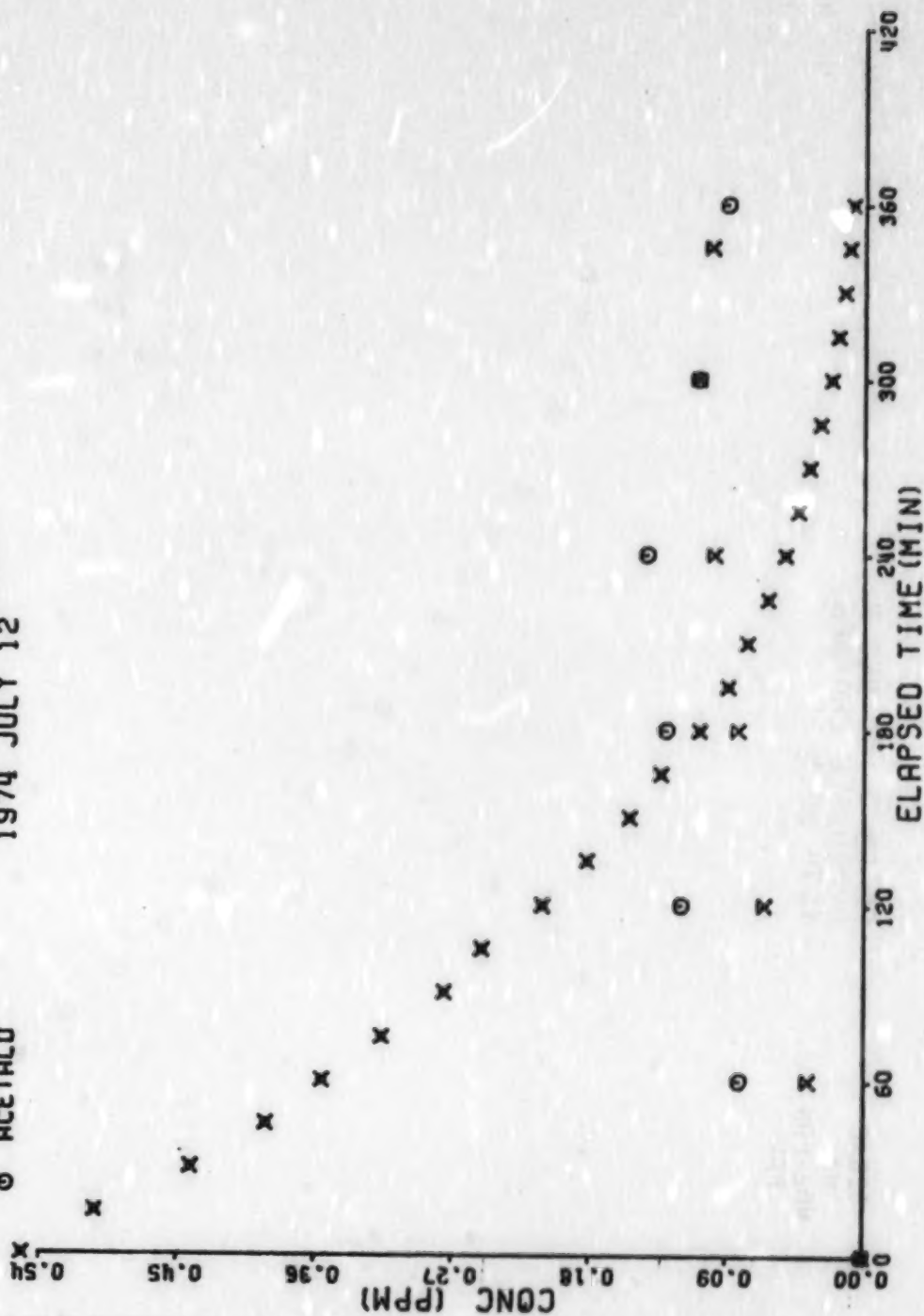
OZONE
NO
NO2-PAN
PAN



EC-53 100 DEG F
EVACUABLE CHAMBER
1974 JULY 12

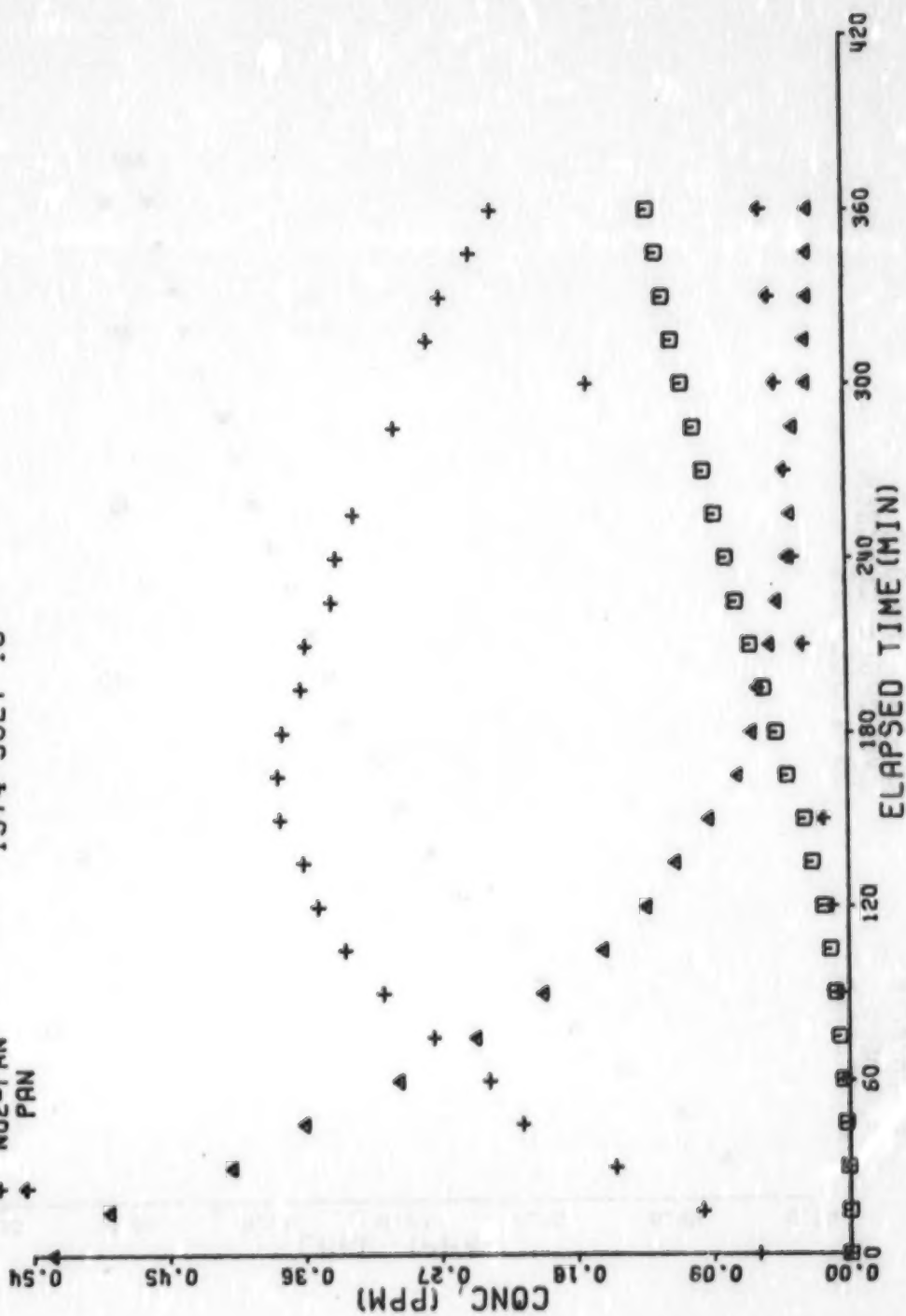
PROPENE
HCHO
ACETALD

x x o



EC-54 60 DEG F
EVACUABLE CHAMBER
1974 JULY 15

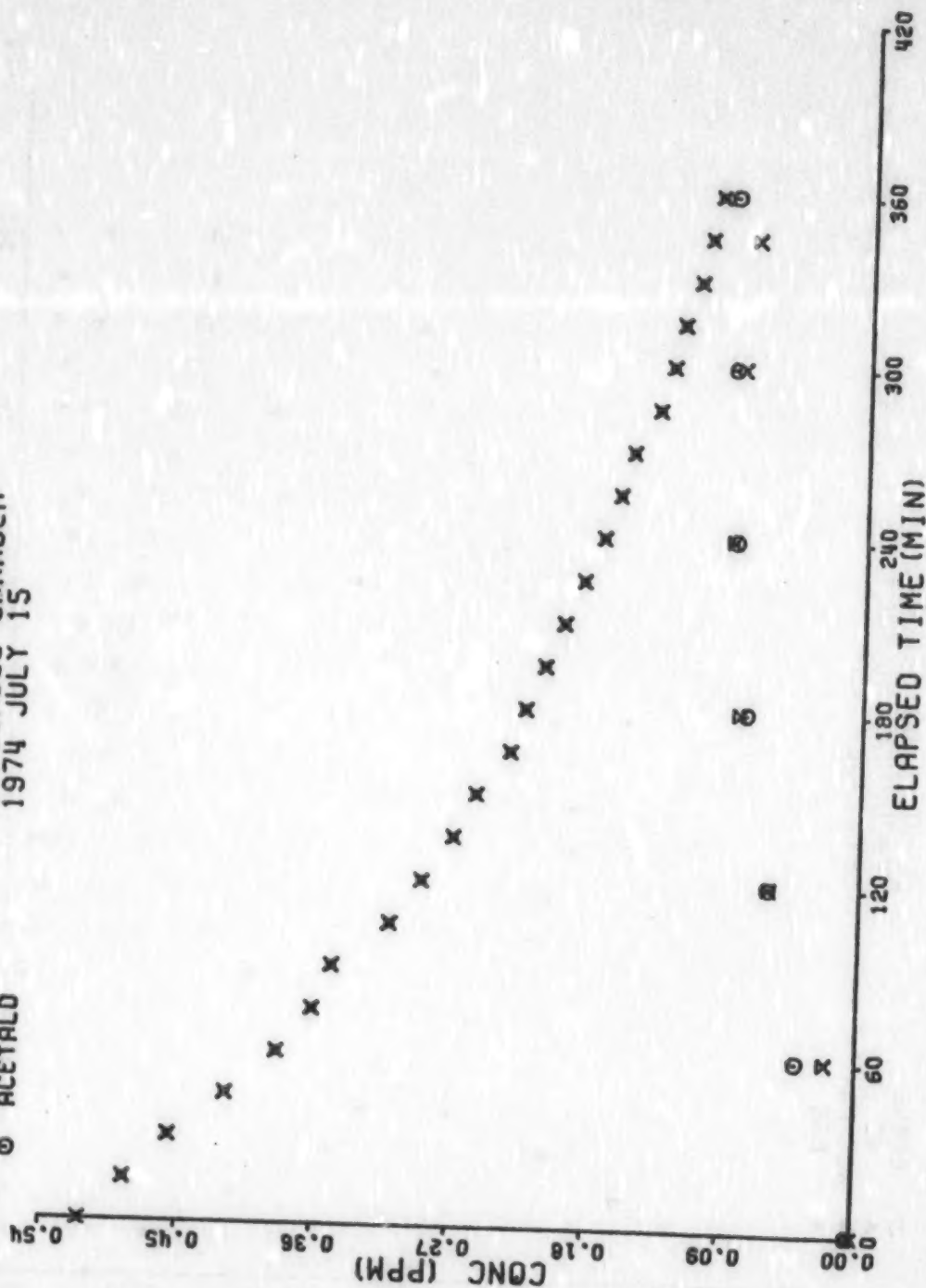
OZONE
NO
NO2-PAN
PAN



EC-54 60 DEC F
EVACUABLE CHAMBER
1974 JULY 15

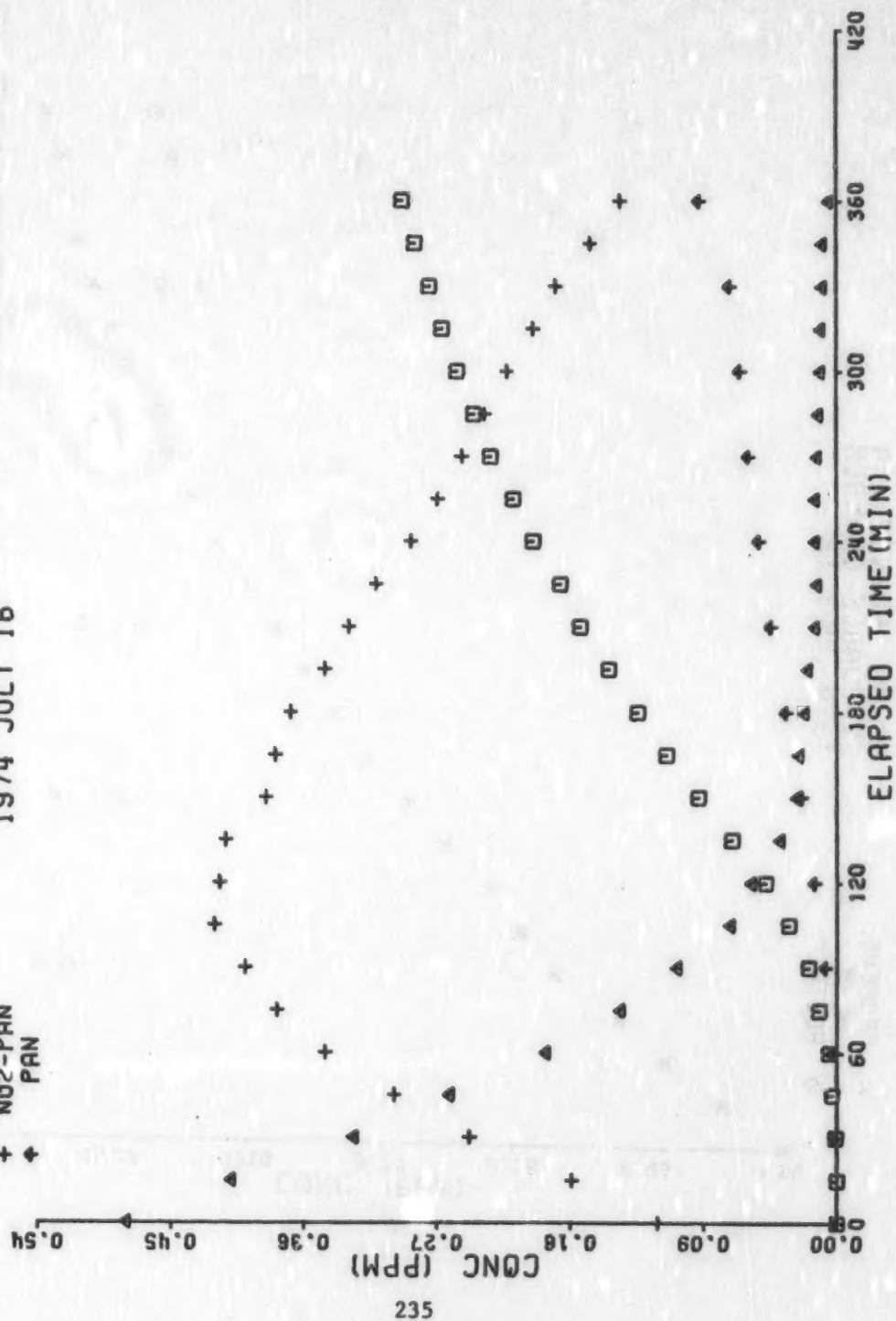
PROPENE
HCHO
ACETALD

X X O



EC-55 NO/NO2 = 4
EVACUABLE CHAMBER
1974 JULY 16

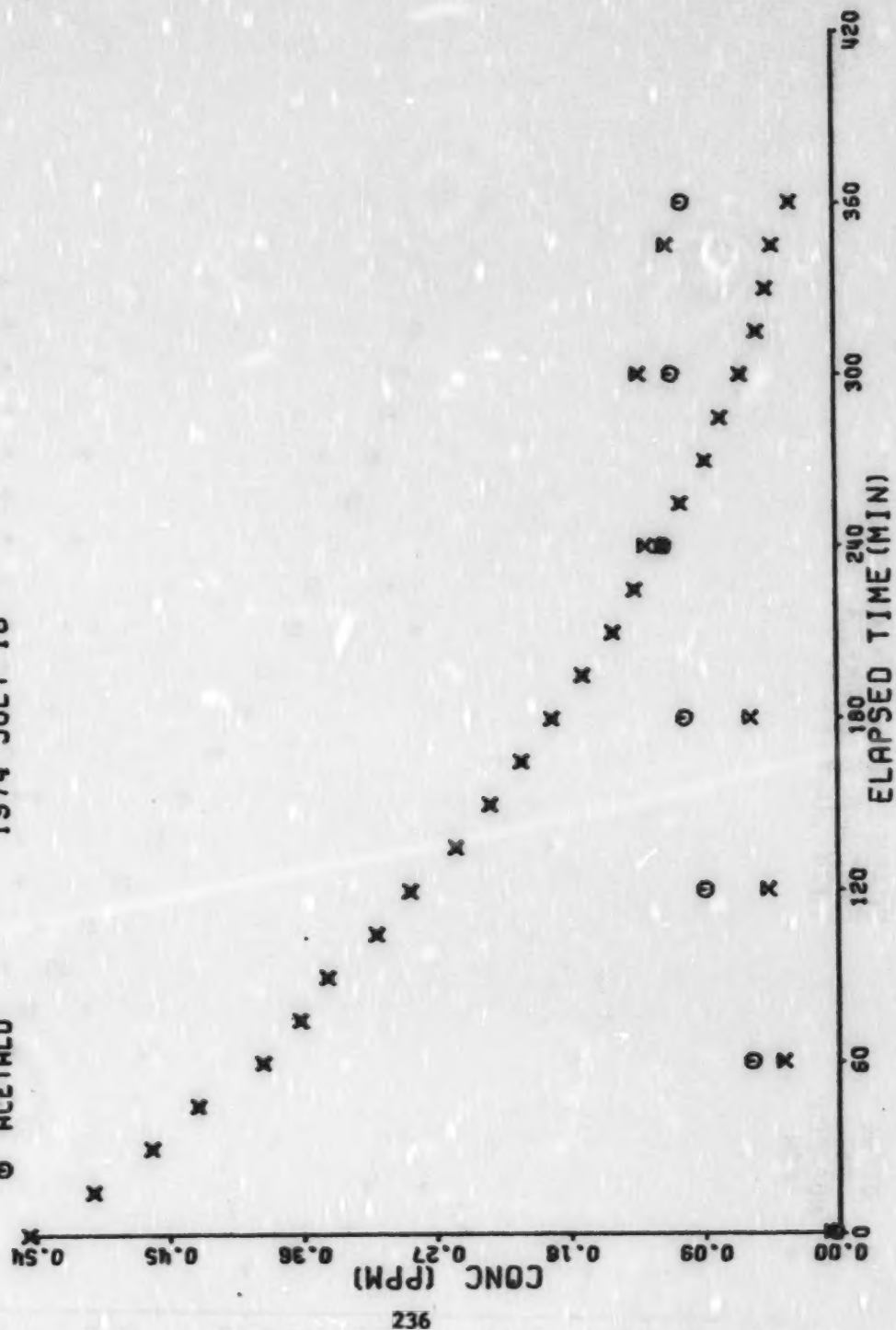
OZONE
 NO
 NO2-PAN
 PAN



EC-55 NO/NO2 = 4
EVACUABLE CHAMBER
1974 JULY 16

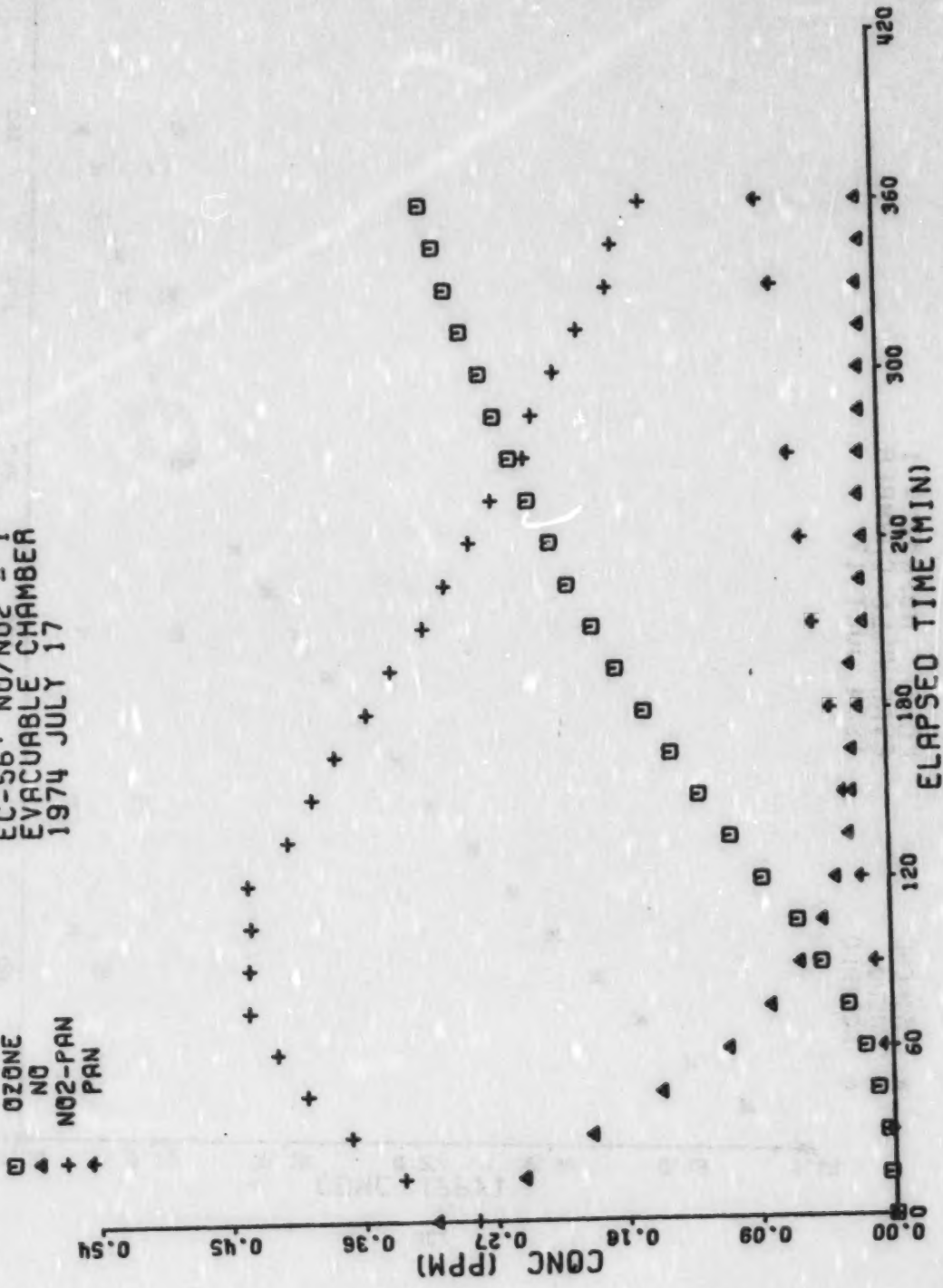
PROPENE
HCHO
ACETALD

X X O



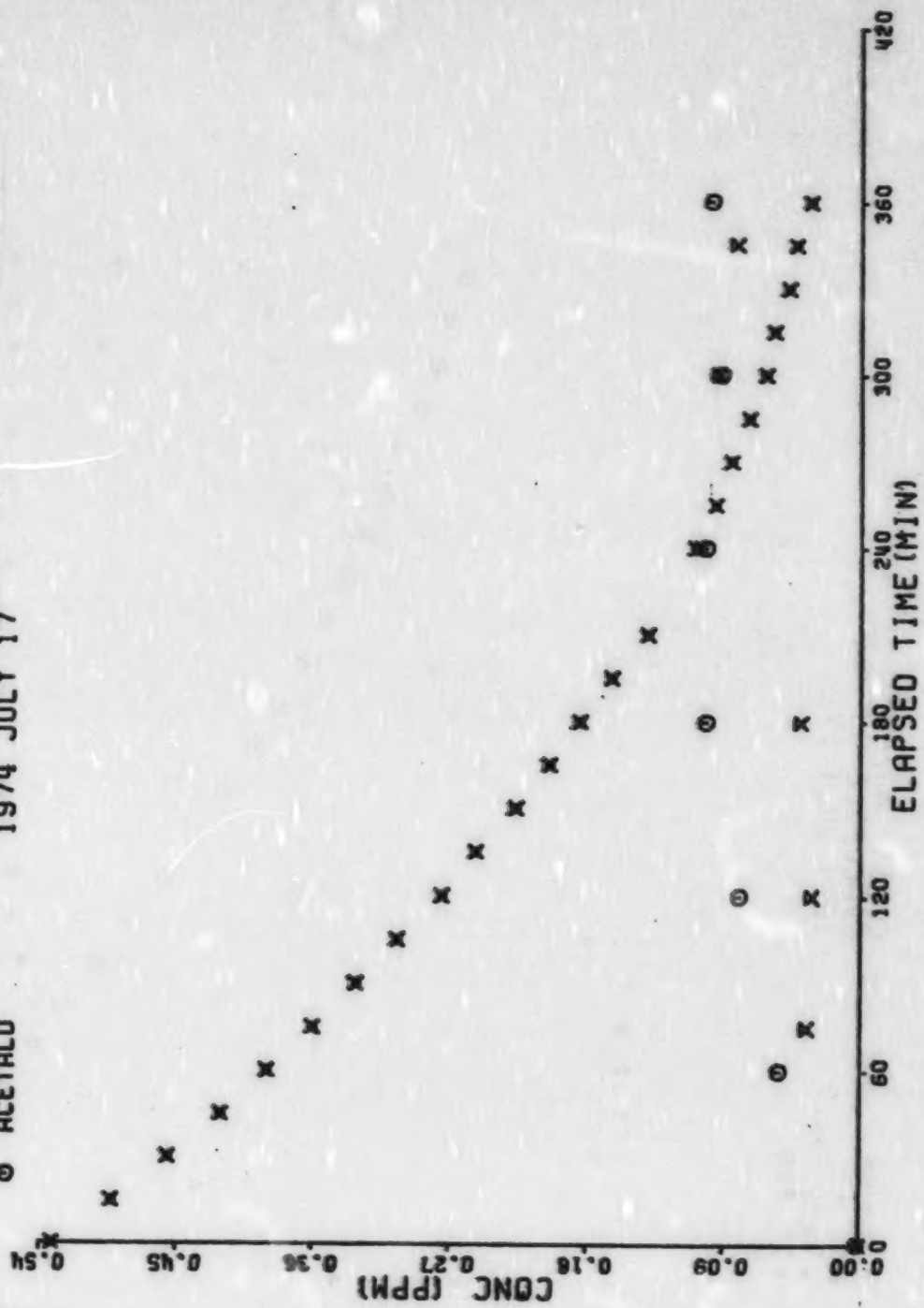
EC-56: NO/NO2 = 1
EVACUABLE CHAMBER
1974 JULY 17

OZONE
NO
NO2-PAN
PAN



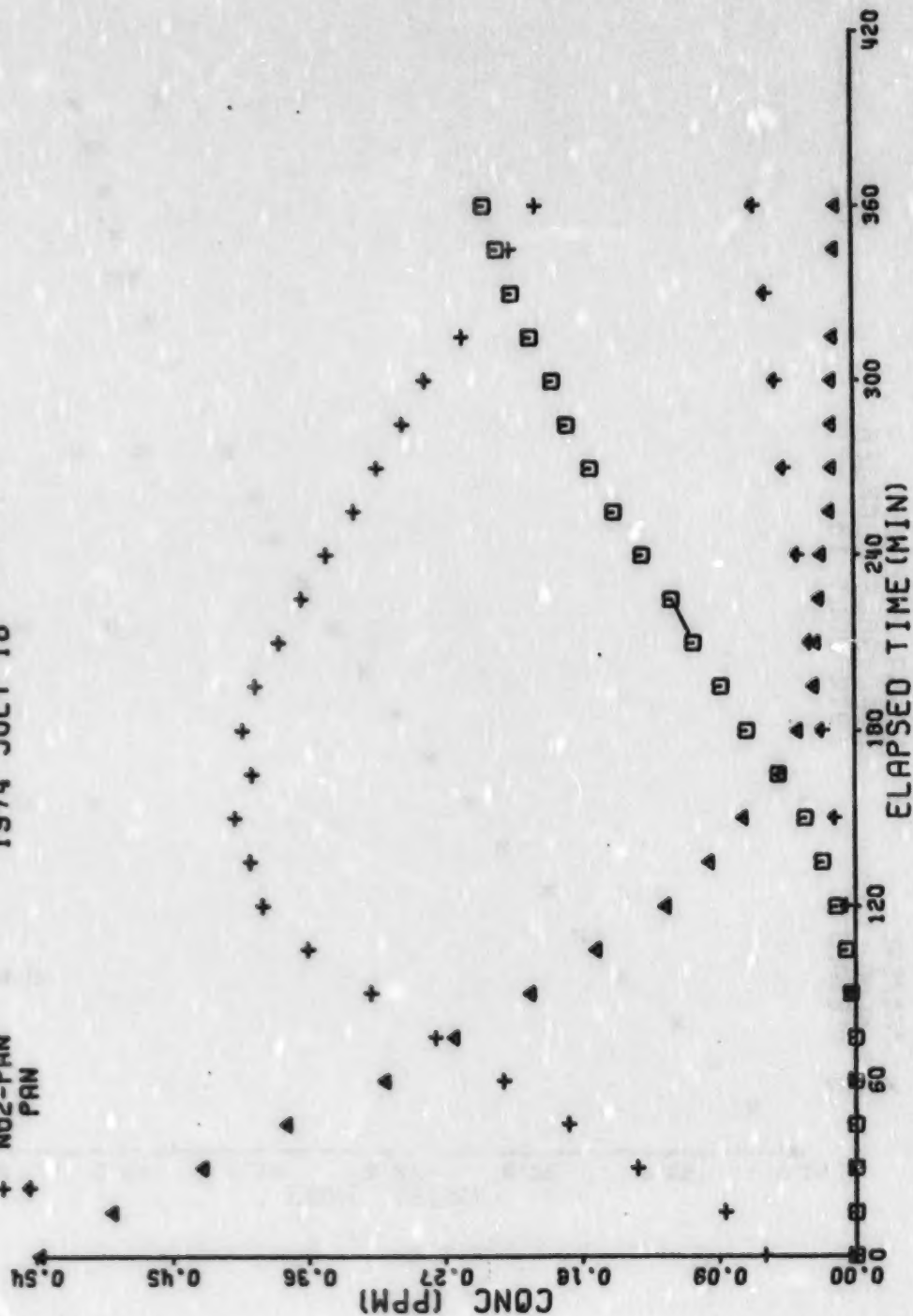
EC-56 NO/NO2 = 1
EVACUABLE CHAMBER
1974 JULY 17

x PROPENE
x HCHO
o ACETALD



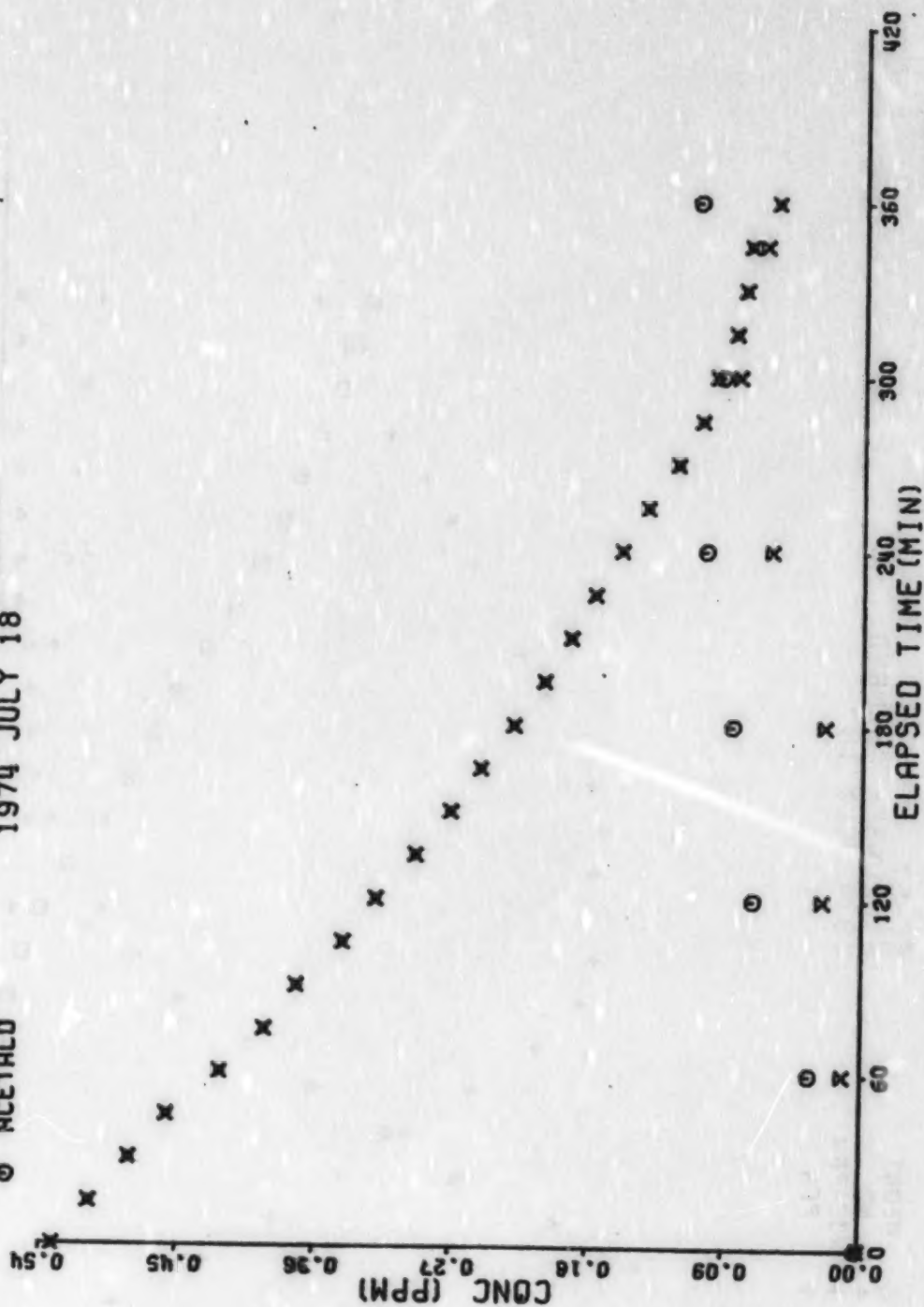
EC-57
EVACUABLE CHAMBER
1974 JULY 18

OZONE
NO
NO2-PAN
PAN



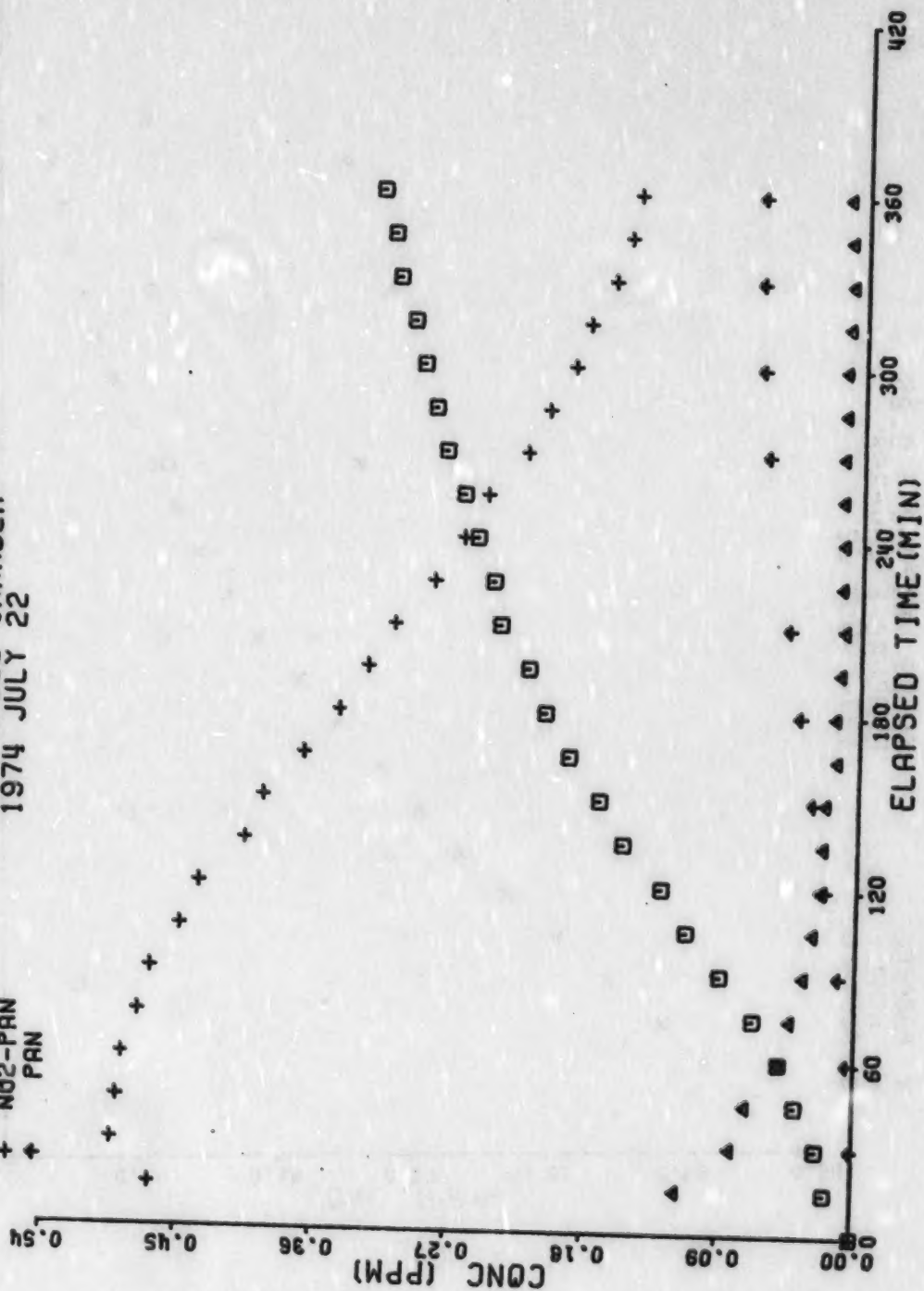
EC-57
EVACUABLE CHAMBER
1974 JULY 18

X PROPENE
X HCHO
O ACETALD



EC-59 NO/NO2 = 0.25
EVACUABLE CHAMBER
1974 JULY 22

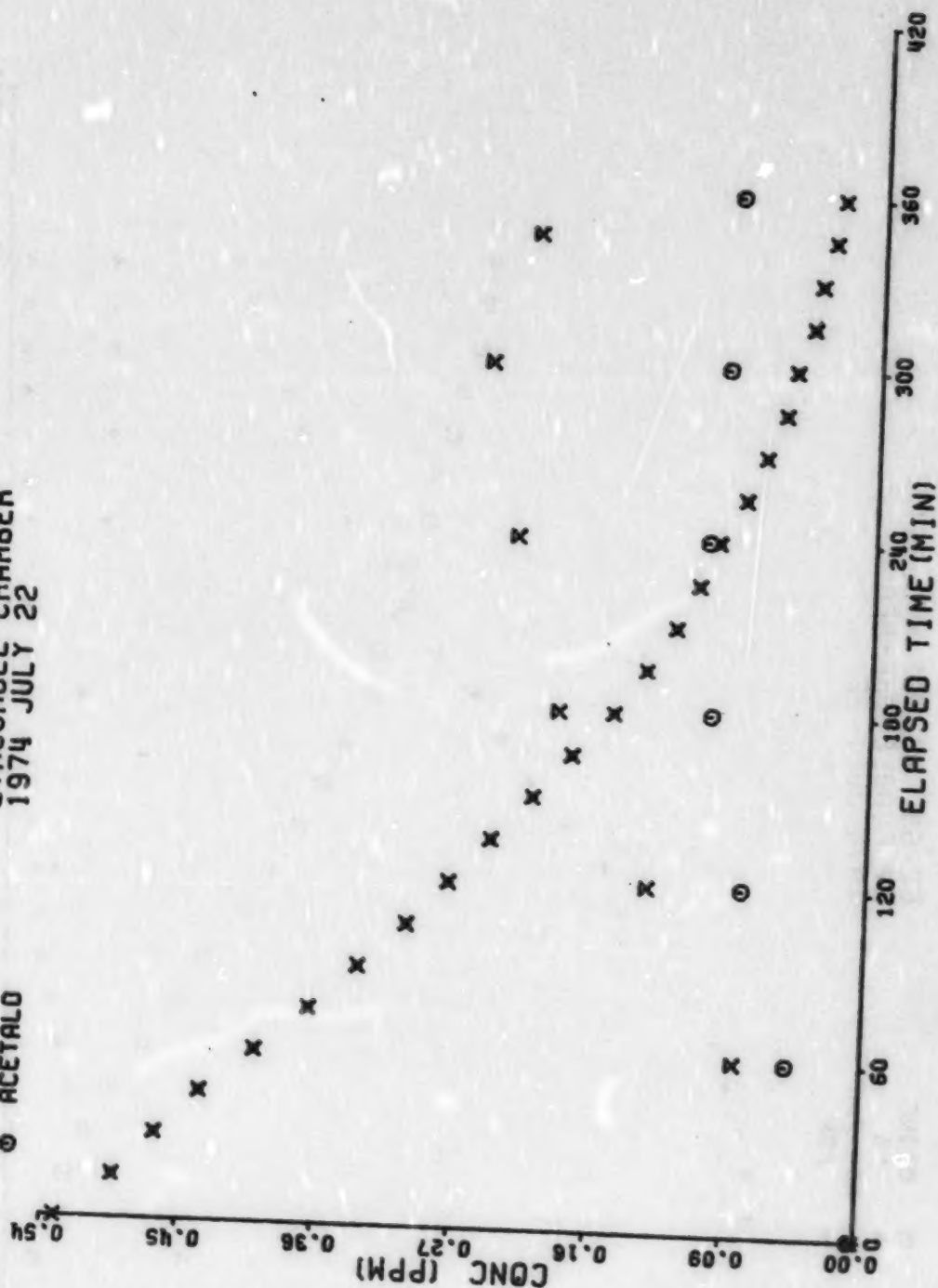
OZONE
 NO
 NO2-PAN
 PAN



EC-59 NO/NO2 = 0.25
EVACUABLE CHAMBER
1974 JULY 22

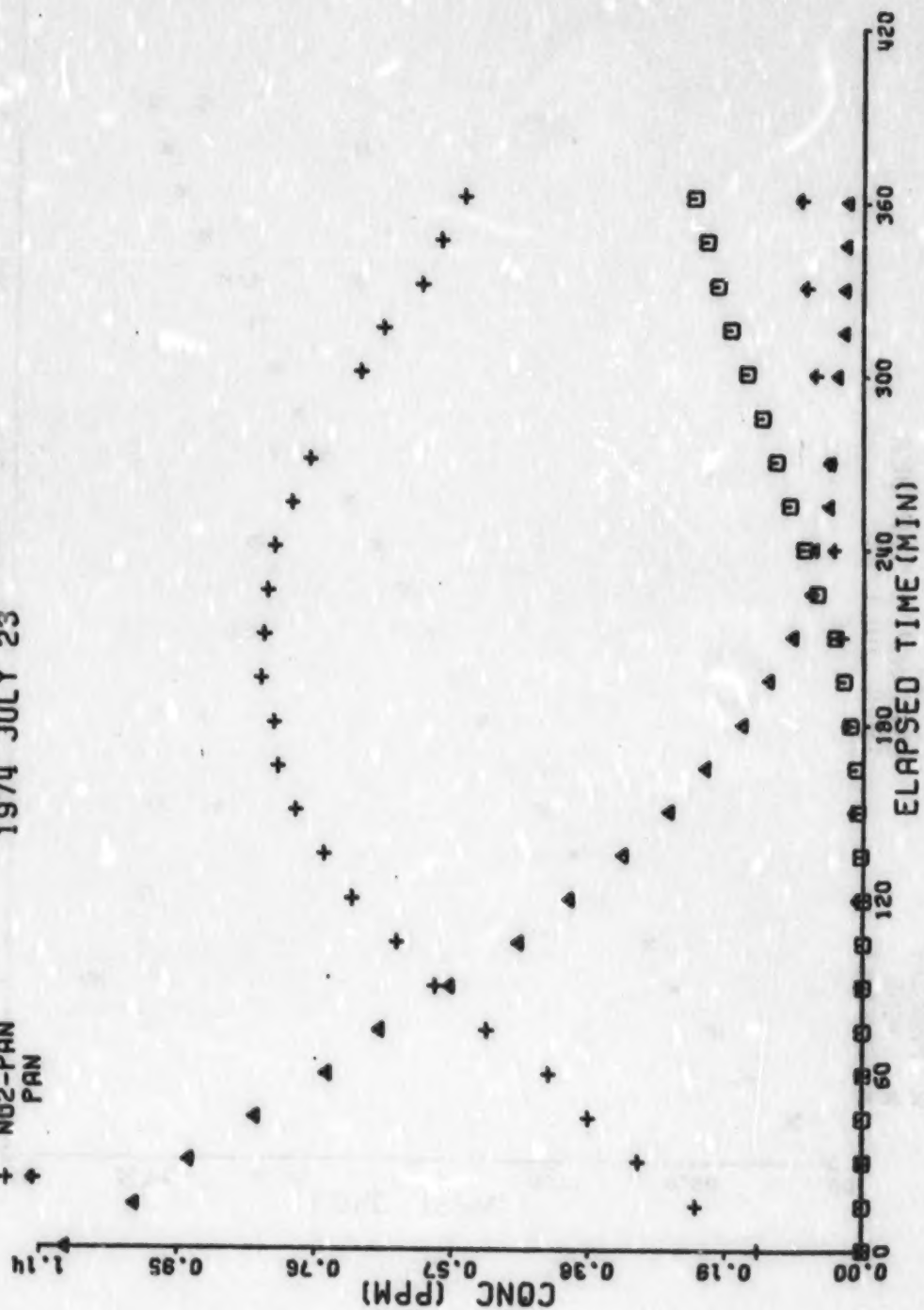
PROPERNE
HCHO
ACETALD

x x o



EC-60
EVACUABLE CHAMBER
1974 JULY 23

OZONE
NO
NO2-PAN
PAN



EC-60
EVACUABLE CHAMBER
1974 JULY 23

X PROPENE
X HCHO
O ACETALD

